AMERICAN GAS ASSOCIATION MONTHLY

APRIL · 1938

Long Range Viewpoint of Gas Sales
W. C. BECKJORD

•

History of A. G. A. Rate Activities
MURIEL C. HENRY

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The Art of Modern Gas Display
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Natural Gas Convention, May 9-12
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Prudence Penny, home economics expert, displays a gorgeous array of foods prepared with the indispensable aid of a modern gas range and gas refrigerator in the M.G.M.-Pete Smith movie short entitled "Penny's Party"

AMERICAN GAS
ASSOCIATION
MONTHLY

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James M. Beall, Editor

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Hollywood Chooses Gas

NATIONAL advertising of gas appliances plus some highly effective selling work on the part of live-wire gas men in Los Angeles have resulted in the production by Hollywood of two pictures featuring all-gas kitchens exclusively.

The latest is "Penny's Party" an M-G-M-Pete Smith short subject in technicolor revealing in ten minutes of fast action a variety of palate-tickling delicacies prepared by the Hearst organization's home economist, Prudence Penny. In this picture Miss Penny performs her cooking tricks with the aid of a gas range and the gas refrigerator, just as she did in last year's Pete Smith short entitled "Penny Wisdom," which recently received the annual award of the Motion Picture Academy.

While Penny's Party is being scheduled for showings, starting in April, M-G-M's successful full-length comedy, "Merrily We Live" is playing to capacity audiences. This latter film depicts what is popularly conceded to be the most beautiful kitchen ever designed. Three gas ranges and two gas refrigerators make up the ensemble.

The gas fraternity in California takes its movies seriously, particularly those in which modern gas appliances play a stellar part. In the case of "Penny's Party" and "Merrily We Live" the California gas companies promptly tell the movie-going world *before they see these pictures* that the kitchens featured are all-gas, representing the last word in beauty, convenience and efficiency. They do this through the medium of special newspaper ads, window displays, and posters.

Prior to the showing of "Merrily We Live" local gas utilities in forty-seven Southern California communities ran special ads calling attention to the beautiful gas kitchen featured in the picture. Much was made of this statement, "Hollywood's most sensational modern kitchen, all-gas equipped. In real life, as in the movies, modern gas appliances bring glamour into the home." Companies were asked to contact their local theaters and put on lobby displays of gas appliances.

Ask the California gas men how one can possibly identify the kind of appliances that are shown in a feature production and their answer is, "Tell them before they see the picture. Get a display of your gas ranges and gas refrigerators in the theater lobbies." That is the selling technique suggested for the rest of the country.

Following the example set by Coast companies, Association Headquarters has produced suggested tie-in possibilities covering the showing of "Merrily We Live." This material, entitled "Give Gas Glamour," is forwarded promptly to gas companies situated in cities where the picture is scheduled to be shown. M-G-M's office in New York supplies the Association with release dates for the picture and as fast as these are received, companies are notified. To date, release dates for "Merrily We Live" have been receivd up to the end of May. As of March 18 more than fifty gas companies had ordered special newspaper mats.

"Penny's Party" will make its first appearances in Loew's theaters in April. Promotional matter on this film, similar to that on "Merrily We Live," is now being prepared and will be issued to gas companies as fast as release dates for the picture become available. Newspaper mats are in course of production, as is other material, that will enable gas companies to advise theater audiences in advance of the showing of the film that Prudence Penny and M-G-M have chosen the fully gas-equipped kitchen as representing the last word in modernity.

A Long Range Viewpoint of the Gas Industry's Sales Program

By WALTER C. BECKJORD

Vice-President and General Manager, Columbia Gas and Electric Corp.

W. C. Beckjord

SEVERAL months ago I gave a talk in Cleveland on "What the Gas Industry Must Do Next."* In that I recited the fact that we had lost considerable domestic business to the extent where it was becoming a serious matter, and pointed out that the changes in the habits of living, cooking, heating, apartment house growth, had brought this about. I then recited the ways and means the Association and the industry at large were taking to offset this trend. This paper apparently fell into the hands of a syndicate writer and I received from many of my good friends throughout the country copies of an editorial which commented on certain parts of the paper.

Change in Living Habits

This editor pointed out "all industries are faced with the same changes in the habits of living. The cotton textile industry had no way of knowing that women were suddenly going to stop wearing three petticoats. The baking industry could not foresee that bread was fattening and thereby reduce the sale of bread. Such shifts are characteristic of American life. They offer fortunes to the men who can see them, but they mean the biggest kind of trouble to the men who get caught in the squeeze."

We have waited too long to be pushed into action. The other fellow gets busy and passes us by. As I see the problem we need a more conservative capital policy and a more aggressive promotional policy, which will not only take into account modern selling methods, but the development of proper equipment to meet the ever growing requirements of the customer, and that includes efficiency and competitive factors as well.

The early history of this industry like any other has been along engineering and production lines, and the pioneers deserve a great deal of credit for building the industry on a firm foundation. All this takes time and the organizations were largely engaged in building plants and distribution systems, and it required about all the executives' time to raise the money to meet these expenditures. The sales effort was left largely to shift for itself, and in many cases the responsibility for selling appliances was placed in the manufacturers' hands. In the early days people used to come around and ask for service because it was new and they wanted to try it out. Other forms of competition were not developed.

● **Digest of keynote address presented before Mid-West Regional Gas Sales Conference, Chicago, Ill., February 10, 1938.**

Some eight or ten years ago I recall sitting in on a meeting with gas men who were discussing the problem of house heating, and their competitor for automatic heat at that time was the oil burner. Since then there has been introduced the automatic stoker which is apparently desirable in some locations, but the trend of the discussion at that time was that the oil burners were not much good, and were giving service troubles and on the whole it was felt gas was far superior.

Now, the situation is entirely different. The mass production problems in these industries have been solved. The oil organizations have made intensive analyses of marketing methods and have put these into effect with excellent results so far as they are concerned. Oil, electricity and coal are all fighting for these markets and highly efficient oil burners are being sold in the heart of the coal country. The sale of the automatic stoker for the use of coal in heating homes has been growing by leaps and bounds.

In 1934 there were 78,363 stokers, 967,824 oil burners and 563,321 gas central heating stations according to the Stoker Air Conditioning Journal. In 1937 there were 308,815 stokers, 1,555,000 oil burners and 720,776 gas central-fired installations. From these figures it is evident the number of stokers increased four times, the number of oil burners increased 60% and the gas burners increased 28%. In addition to the central-fired gas jobs there were 1,300,000 space heating jobs, largely in the south, making over 2,000,000 gas-heated homes.

Stoker Sales Gain

The oil burner and stoker people have done an outstanding sales job and the stokers show the greatest percentage of increase. The first cost of their equipment is substantial and represents a relatively large investment in the household equipment. This is something the gas people should pay heed to. It is interesting to note that in three large divisions of the Columbia System, out of 4,200 homes built in 1937 about one-third were equipped with central-fired gas jobs.

Now, of course, these oil burners did not replace gas, nor could gas have been sold in many cases where the oil burner was installed, but they have replaced approximately 10 million tons of anthracite coal in the northeastern section of the country. In Pennsylvania, New Jersey, New York and the New England States, there were in use on January first, 1937, 733,940 oil burners, including 114,176 installations made in the year 1936.

I might call attention to the fact that the production of anthracite has gone from 100 million tons in the peak year

* See A. G. A. MONTHLY, October, 1937.

1917, to 50 million tons for the year 1937. This illustrates what can happen to a well organized and substantial industry, over the years of competition.

The advertising of the oil burner people is tremendous. I haven't any figures available at this time, but I am sure it is very substantially more than anything the gas industry is doing and the figures for the gas industry show a total of approximately $8,000,000 for the year 1936 for both manufactured and natural gas, which is just a little over 1% of gross revenue, or about 50¢ per customer per year. With 720,776 central heating jobs in the country and approximately 1,300,000 heated by gas in one form or another, the saturation is about 12%.

Gas Sales Trends

I have been developing some trend figures over the past several years on gas sales in both the manufactured and the natural gas industries. There is a slight upward trend in 1937 for natural gas including house heating as compared with 1936, the percentage based on 1929 being 91.6¢, or an increase of 1.6¢, but for manufactured gas the trend is still downward being 93.1¢ of the 1929 sales as compared to 95.8¢ in 1936.

There has been a great deal of discussion on the causes of the decline. We have talked it over the past five years or more. Some one has said—with apologies to the ladies—"words are the daughters of men—deeds are the sons of heaven." The time for further talk is gone and what we need is action. If action is not forthcoming, the trend is going to be still further downward. I believe we have in our industry all the elements necessary for the successful marketing of our product. It is efficient, the service is good, and competition can be met on a proper basis.

I think all of us know what the situation is in regard to obsolete equipment. Half of our appliances in use today are over seven years of age and one-third are over ten years, so there should be a replacement market of about two million ranges a year. The gross earnings per family in the natural gas industry have dropped from $40.36 in 1929 to $37.98 in 1937 and

WHAT'S Wrong WITH THIS PICTURE?
nothing!
. . . . . as seen through the eyes of Californians, but . . .
Natives of many other communities throughout the country would think it very strange . . . because no smoke appears. Smokeless chimneys—on factories, steel mills, business buildings, schools, homes—a blessing of Natural Gas fuel that we take for granted—as we enjoy our clean, healthful cities, air-conditioned by Nature, never sullied by grime-laden clouds belched from thousands of chimneys! Add to this unique cleanliness, the speed, dependability, controllability and economy of Gas—and you have five reasons why Gas is the one ideal fuel for your requirements, whatever they may be. Your Gas Company's engineers are at your service in planning gas-fired installations. Free consultation.
GAS

Advertisements such as this one by the Pacific Coast Gas Association are materially aiding gas sales to industry

in the manufactured gas industry from $34.06 in 1929 to $27.63 in 1937. It is time something was done about it.

The drop in domestic load is reflected somewhat in the sale of gas and electric ranges. In the eight-year period 1929-1936, 8,730,000 ranges were sold in the gas industry as compared with 1,213,000 electric ranges. But, while the ratio for 1929 was 10 to 1 in favor of gas ranges, the margin in 1936 was 5 to 1. And, during 1937, an estimated total of 1,600,000 gas ranges was sold, as compared to 405,000 electric.

I have been a good many years in this business and the longer I stay in it the more I realize that if we stick to our knitting and plug away on intelligent methods of selling our product, we will come out all right. It is a long road that has no turning.

I can remember when many utility people felt the gas refrigerator was not good, too many troubles, too much water, too much servicing. Look at it now, no trouble, no noise, and there are over 1,150,000 units in service. But, a good many headaches and grief went into making that success and it was not all due to one man. It was a multitude of effort born of necessity, straight thinking and telling each other the truth. We need more of that.

As an industry we have spent too much capital money and not enough promotional money. We have not curtailed sufficiently spending capital money for a shrinking domestic market. Let us recognize this and question ourselves accordingly. There is this fact about capital money that should be of interest to the executives,—it takes fifteen to twenty years to amortize capital money and it often takes a long time to find out if it were a profitable investment. Promotional money is amortized in one year, and whether the promotion is 100% effective or not, certainly some good must be obtained by it and some business added to the lines.

Change-over Factors

A study of the change-over to natural gas or mixed natural gas indicates a resultant growth in volume and dollars even though at lower unit rates. One large company which changed over recently, sold 50% more therms in the first full year of natural gas operation. This involves a big increase in house heating business and much lower unit cost, and practically twice as much sales in the industrial. This of course reduced the average rate earned but it still showed substantial increase in net earnings.

This shows it is possible to meet competition, and the old idea that we could still earn a return on investment made year after year without the necessity of meeting the competitive situation, is gone with the wind. That investment must be wisely made to cover the markets available and if mistakes in judgment are made, they should not be made too often—the cumulative effect is disastrous.

It is not too late for the gas industry to speed up its sales efforts. Many companies have done an outstanding job. Proper apparatus has been and is being developed, and it is a question

(Continued on page 159)

Historical Review of A. G. A. Rate Structure Activities

By MURIEL C. HENRY

ACTION of the Executive Board of the American Gas Association at its meeting on January 26 in changing the name of the Rate Structure Committee to Rate Committee and redefining the extent of its duties marked another milestone in the recognition of the ever-widening scope of the problems presented to this committee.

The duties of the Rate Committee as established by the Executive Board are: "To make and present studies and recommendations to the gas industry on all phases of rate-making and rates, including the fundamental basis for determining proper rate levels; the structures, forms and types of rates which should prove most equitable to the utilities and their customers, and at the same time promote most effectively the use of gas, and any other matters having a direct bearing on gas utility rates."

The Rate Committee, now in its eighteenth year, was first formed in 1920 when the Executive Board authorized George B. Cortelyou, then president of the Association, to appoint a committee on "Methods of Charging for Gas."

Early Rate Studies

A study of the history of the various organizations, predecessors to the present American Gas Association, discloses many efforts to awaken and sustain the interest of the industry in the need for the study of equitable methods of pricing its product. As early as 1880, the records of the American Gas Light Association show some interest being displayed in the methods of charging for service.

During the years between that date and 1906, in the proceedings of the American Gas Light Association, Ohio Gas Light Association, and Western Gas Association, there appeared papers on meter rents, prepayment meters, government control of the price of gas, minimum bills, differential rates for illuminating and fuel gas, methods of charging for gas, etc. While these papers touched on various phases of the general problem now within the jurisdiction of the Rate Committee, they did not result in any continuing action. In the forefront of the militants of this period was Henry L. Doherty, a persistent crusader for more scientific rate forms.

In 1906, a long and interesting paper by W. H. Gardiner, Jr., of Boston, on the subject, "The Making of Rates and the Additional Business System of Cost," delivered before the Western Gas Association seems to have focused sufficiently the attention of the industry, as represented by that Association, so that a "Committee on Rates" was appointed. The committee consisted of Chairman Gardiner, Henry L. Doherty and George McLean.

First Report in 1906

Upon the amalgamation of the three Associations, Western Gas, American Gas Light and Ohio Gas Light, into the American Gas Institute, this committee made its first report in 1906 to the new Institute. With real breadth of vision, it refused to consider individual existing rate forms but mapped out for itself a comprehensive program of fundamental studies designed to develop the true scientific principles upon which rates, equitable to the public and to the company, could be formulated. Its second report in 1907 upon one phase of this program apparently was so coldly received that on motion of Mr. Doherty, the committee was discharged.

The next formal attention to rate problems by way of committee activity appears in the Natural Gas Association of America in 1912, following the presentation of a paper by A. C. Hartzell on the readiness to serve method of charging. This committee headed by L. B. Denning reported in 1913 on the sound fundamental principles, economic and legal, of a proper natural gas rate. It continued in existence during 1914, a paper on rates by Alfred Hurlburt being referred to it that year, although the committee made no report of its own.

The committee seems to have died of inactivity, to be revived again in 1916 with Judge S. M. Douglas, chairman, Alfred Hurlburt and Donald McDonald. This committee made only one report, in which it endorsed the service charge, and then followed its predecessors into oblivion. In the succeeding years the Natural Gas Association, until it merged with the A. G. A. in 1927, had no further committees on rates although it heard numerous discussions on various phases of the rate question. Most of these discussions ended in the conclusion that the general level of natural gas rates was too low, speakers pointing out that little could be done because initial rates in that business were too low.

Meanwhile, in 1914, a Committee on Rates of the American Gas Institute again was directing attention to the necessity for better methods of charging in view of the diversified uses to which gas then was being adapted. This committee recommended the appointment of a permanent committee on rates but no action followed this recommendation.

Forerunner of Modern Rates

Present at the 1914 session of the American Gas Institute was W. H. Gardiner, Jr., member of a committee of the National Commercial Gas Association which was investigating "Differential Rates." Mr. Gardiner described the studies which the N.C.G.A. Committee was making. This Committee of the N.C.G.A. was headed by F. W. Frueauff and issued in 1914 a report on differential rates in which many of the principles now commonplaces of rate theory were discussed extensively. Following a year of inactivity, a Committee on Rates with W. H. Gardiner, Jr., as chairman appears in the records of the National Commercial Gas Association for 1916.

In 1918, the American Gas Institute and the National Commercial Gas

Association merged to form the American Gas Association in whose annals again is to be found Henry L. Doherty urging his thesis of the readiness-to-serve method of charge for all consumers.

Although the proceedings of the organization meeting of the American Gas Association in 1918 show that consideration was given in the Technical Section to the matter of a committee on rates, apparently no action was taken until the editor of *Gas Age*

J. D. Shattuck, chairman; D. D. Barnum, Douglass Burnett, H. H. Clark, W. J. Clark, L. R. Dutton, Ralph Elsman, Alfred E. Forstall, F. C. Freeman, Ewald Haase, Henry Loebell, T. V. Purcell, George Priest, Robert E. Ramsey, H. S. Schutt, C. G. M. Thomas, F. C. Weber, S. S. Wyer and P. S. Young.

It is of interest that two members of this original committee, Douglass Burnett and Ewald Haase, were members of the Rate Structure Committee

mittee in 1935) is used as a text at Columbia University.

From 1927 to the present time, the committee has proceeded with specific studies, based upon the application of the principles it has heretofore enunciated, designed to lead the way to scientifically adjusted rates which will produce the maximum of business of each class served, with substantial equity of cost division between classes of customers and reasonable return to the company. These studies have cov-

T. V. Purcell *Ewald Haase* *T. C. O'Hare* *Douglas Burnett* *G. I. Vincent*

F. A. Newton *H. D. Hancock* *E. N. Strait* *A. I. Phillips* *Robert E. Ginna* *Donald A. Henry*

Shown here are some of the past chairmen of the Association's rate committees who have served between 1920 and 1938. The present chairman is Donald A. Henry

roused the members of the Executive Board in 1920. On April 28, by action of the Executive Board, the president of the Association was authorized to appoint a committee on "Methods of Charging for Gas," the said committee also to "take under consideration the recommendation of the Managing Committee of the Commercial Section to the effect that it would be desirable to secure the elimination of the minimum charge and the general adoption of the ready-to-serve charge as one means for solving the problem of the non-profitable consumer."

Acting on this authorization, the president appointed the "Rate Structure Committee" which made its first report in 1921. The members of that committee were:

throughout its existence and are now members of the current Rate Committee.

A long range view of the work of this committee down to the present time discloses that from its inception until about 1927 it devoted its attention to an effort to train gas company executives to think of rates in scientific terms involving equitable allocation of costs and proper attention to education of the public and regulatory authorities in correct and orderly thinking along these lines. The highlight of the committee's written reports during this period was "Principles of Rate Making for Gas Companies," published in 1926 and edited by a subcommittee headed by T. V. Purcell. This publication (revised by the com-

mittee in 1935) is used as a text at Columbia University.

From 1927 to the present time, the committee has proceeded with specific studies, based upon the application of the principles it has heretofore enunciated, designed to lead the way to scientifically adjusted rates which will produce the maximum of business of each class served, with substantial equity of cost division between classes of customers and reasonable return to the company. These studies have covered domestic, commercial and industrial applications and the forms of rates best adapted to each. Since the consolidation of the Natural Gas Association with the A. G. A. in 1927, the committee has represented also the rate activity of that Association.

It is interesting to note the number of well known names in the gas business which have been associated with this committee as chairmen: J. D. Shattuck, T. V. Purcell, Ewald Haase, T. C. O'Hare, Douglas Burnett, G. I. Vincent, L. R. King, F. A. Newton, H. D. Hancock, E. N. Strait, H. H. Agee, Alfred I. Phillips, Robert E. Ginna.

For his pioneering and constructive leadership in rate making, T. V. Purcell received the Charles A. Munroe

Award in 1931. This presentation has been made annually since 1929 in recognition of the individual who contributes an outstanding achievement to the growth of the gas industry.

The present membership of the Rate Committee is Donald A. Henry, chairman; Kurwin R. Boyes, secretary; H. H. Agee, Frederick C. Beck, J. I. Blanchfield, Douglass Burnett, I. L. Craig, C. F. deMey, H. E. Dexter, C. G. Eichelberger, William J. Foster, Jr., R. E. Ginna, Ewald Haase, H. D. Hancock, R. E. Keller, A. Gordon King, R. H. Knowlton, F. M. Terry, F. X. Mettenet, John J. McMahon, F. A. Newton, A. I. Phillips, Charles S. Reed, E. N. Strait, G. I. Vincent, and R. P. Wagner.

Century of Gas Service Louisville Record

FILLED with photographs of historic scenes which spotted its 100 years of existence, the Louisville Gas and Electric Company, Louisville, Kentucky, has issued a most interesting publication to commemorate its anniversary. It is a review of the years of progress representing an unusual record of public service. The company is a direct descendant of the Louisville Gas and Water Company which was granted its original charter by the Commonwealth of Kentucky on Feb. 15, 1838.

With a population of 21,240 in 1840, gas sales for that year amounted to 6,545,810 cubic feet, far less than the present sales for one day. In 1860, 22 years after the beginning of gas service, there were 2,879 gas customers, one for each 24 persons in the city. Gas service was selling at 15 times its present price to mercantile establishments, offices and the wealthier homes. There were 935 street lamps. The consumption was 1,000 cubic feet of gas per consumer per year.

In 1885—25 years later—there were 7,250 gas users in the city, still only one for each 24 inhabitants. With the price reduced to only six times the present one, some gas was beginning to be used for cooking purposes. In spite of the fact that electric lighting was coming in, there were still over 300 gas street lamps in use. Gas use had increased to approximately 5,000 cubic feet per consumer per year.

Twenty-five years later, in 1910, with the price of gas reduced to only three times its present cost, practically every home in the city had gas service. There were 40,000 gas consumers, one for each five persons and, while gas lighting had practically disappeared, every one used gas for cooking (at least in the summer) and gas logs in the fireplace were becoming a common sight. Gas use had increased to 10,000 cubic feet per consumer per year.

Now the company has 85,000 gas consumers, one for each four persons in the city. Gas is universally used for cooking and water heating, and one out of every six homes is heated entirely with gas. Gas consumption per domestic consumer has increased to 55,000 cubic feet per annum. An additional billion and a half cubic feet are used by the factories, stores and office buildings of the city.

T. B. Wilson is president of the Louisville Gas and Electric Company. Other officers are: A. W. Lee, Jr., vice-president in charge of operation; Robert Montgomery, vice-president in charge of sales; J. J. McKenna, vice-president and treasurer; and F. J. Pfeiffer, secretary and assistant treasurer.

"Court of Flame" at New York World's Fair

OUTSTANDING among the awe-inspiring spectacles that will draw visitors from all ends of the earth to the New York 1939 World's Fair, will be the majestic "Court of Flame," the focal point and main entrance to the gas industry's exhibit.

In the center of the Court, which is open to the sky, a ten-foot cube of glass resting on one of its corners will spiral skyward a perpetually flaming gas torch. Around this impressive central motif with its unique ring-like roof will rise four 90-foot pylons, each wrapped in a wave of flame, symbolizing the fuel on which the whole gas industry is built.

The industry's $750,000 exhibit group, a "triumph in modern exposition architecture," was designed for the cooperative, non-profit corporation known as Gas Exhibits, Inc., organized to conduct and manage the industry's participation in the Fair.

At the base of the glass cube and grouped around the pylons, dramatic displays and models will show the scientific background, such as manufacture, refinement, storage and distribution, that makes possible the various utilizations of gas fuel.

Adjoining the "Court of Flame," on one side, will be the main exhibit area of gas appliances of every description. Here will be portrayed the history of cooking throughout the rise of civilization. A graphic exhibit will demonstrate how refrigeration is produced by the heat of a gas flame. Old fashioned methods of heating will be vividly contrasted with the recent advances in the science of heating and air-conditioning.

In the center of a tree-shaded patio will stand a small beautiful home, where the housewife will view in its proper setting every device contrived by the gas industry for her health and comfort.

So that the whole story may be seen as well as heard, lectures will be given and motion pictures shown in an auditorium seating 350 persons.

Alfred W. Dater Dies

ALFRED WARNER DATER, vice-chairman of the Board of Directors of The Connecticut Power Company, died February 21. He was born in Brooklyn, New York, August 23, 1872.

Mr. Dater went to Stamford, Connecticut, to organize and become vice-president and treasurer of the Oven Equipment and Manufacturing Company in 1903. The year following he became affiliated with The Stamford Gas and Electric Company as treasurer and a director. In 1911 Mr. Dater was elected vice-president, in which capacity he served for six years, when he became its president.

When the Stamford Gas and Electric Company merged with The Connecticut Power Company in July of 1936, he was elected vice-chairman of the Board of Directors of The Connecticut Power Company, of which he was a director, and chairman of The Stamford Gas and Electric Divisional Committee.

The Art of Modern Gas Display

By HARRY SWENSON

The Peoples Gas Light Co., Chicago, Ill.

Harry Swenson

WHEN it comes to buying we are all from Missouri, for we are as a whole, a nation of visual buyers and like to be shown, or better than that, to look for ourselves.

We are fast becoming a race of window-shoppers, fabric-feelers and store-snoopers. To shop around is a favorite pastime and perhaps our cheapest and most instructive form of diversion. Anyone who reflects will agree that American merchants, in one way or another, entertain more people than Bing Crosby, Aimee McPherson, or Cecil B. DeMille can ever dream of doing.

The reason is simply this: the buying public wants to be entertained, humored and pampered and above all it wants to look. I have no quarrel with that for this particular propensity is the foundation of my job. Display provides a free show that changes frequently, goes on forever, and is forever interesting. Show windows and showrooms present to view all the glories that brain and brawn have fashioned and, incidentally, more temptations than ever beset St. Anthony.

Display a Science

Today display is something of an art, something of a science and inextricably linked with profitable merchandising. Merchandise to be sold must be shown and shown in such a manner that the value of it is enhanced, preferably a notch above that of our rival merchandisers.

"A window display," says Paul Hollister, Macy's publicity director, "is a combination of a poster, a newspaper advertisement, a speech, a stage-set and a scarf dance." It is generally supposed that showmanship in one form or another is a priceless ingredient in making a successful display. To me showmanship in my business does not mean standing on my head to get attention but rather a knowledge of the elements that have attention value and can in some way be dramatized.

Display like all advertising must have either news or entertainment value and not be merely a statement of cold facts. Reduced to a formula, good display is: facts colored by showmanship. All good showmen introduce a modicum of dignity to remove them from the classification of mountebanks. Likewise a good display-man observes a degree of decorum so as not to appear to be hawking his wares in questionable taste. Good display should have a distinctive character and preferably a character recognized as exclusively your own.

Competition for Attention

The value of any display is proportioned to the number of people observing it. There is keen competition for attention; there is hurry and distraction on all sides. It is, therefore, essential to show and tell something with speed and appeal to have it register in the customer's memory lane. To do this consistently well has a direct effect on the consumption of aspirins and accounts for the many displays that are both artistically and commercially stale. Workable ideas for displays are very elusive and I have personally found that the very worst way to get hold of an idea is to go hunting expressly for it.

Very few things in this world travel on merit alone, all must be qualified. It isn't enough to say, "This is a swell car," you add, "It has a wonderful pickup," or you say, "She's a good girl, she stays home nights," or to be specific, "This is a grand Gas range, it has an oven regulator." To concisely and dramatically qualify is the very essence of good display.

Surely there is no doubt in any sales manager's mind about the need and value of display. Department stores and our competitors would no more think of omitting display than they would think of having deaf mutes as salespeople. Merchandising houses recognize floor and window display for its primary purpose in their plan—that of adding to the store's income and treat display as a farmer treats his best cow.

Display should not only stimulate desire to own but it should make buying easy and pleasant. This principle is followed by all successful merchandisers. You will note that where the sales personnel is not the highest of its class, ingenious display makes buying almost automatic.

I honestly believe there is much to be said on this point. Many people in sales work don't seem to realize that a vast group of prospects do not want to be *sold to—they want to buy* and want only a minimum of sales assistance. To them eloquent display is far more important than the sales person.

Utilities Need Good Displays

Utility companies generally have not made themselves conspicuous by having good displays. In fact most of them look as though they were sorry they ever got into the business of selling. Most salesrooms look like a dismal cross between a small town bank and a second-hand store and have as much color as a Mennonite schoolroom. The merchandising utility more than any other merchant has need of colorful, potent display and the agreeable atmosphere such displays create.

Display is advertising in three dimensions. It uses color liberally, it has both tangible and visual appeal. Through these distinct advantages it closely rivals newspaper advertising as a device for creating sales. Certainly newspaper advertising reaches a larger group but display has the advantage of catching the prospect at the point of sale. Display then is a necessary adjunct to any and all other forms of advertising.

In technique it differs from its big sister, printed advertising, for it appeals less to reason than to the senses. It works with speed for what it is

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Presented at Mid-West Regional Gas Sales Conference, Chicago, February 11.

designed to do it must do quickly—it must burgeon interest before curiosity wilts. In a way display is the store's flirtation with the innocent passerby, though in this case the flirt actually means business.

What the display implies or says pictorially is more important than any wording added to it. It should be in effect a synopsis of all the endearments you would heap on the merchandise in your newspaper copy. By graphic means it must connote hot, cold, clean or what have you, all according to the character of the merchandise, the season or the general story.

Window displays that clicked for The Peoples Gas Light and Coke Co.

Below—A model basement display of the same company

Sound Psychology Needed

Display then, like all advertising, is basically an application of psychology. It is never done hit or miss but is as carefully studied and planned as any other presentation for public approval. The displayman today takes his job seriously, he knows the world's most valuable real estate is turned over to him. He uses less artiness and more sound psychology. He is less eager to surprise you with tricks, complicated motion and startling effects than to convey the feeling that you are missing something in life by not owning the piece of merchandise he shows you. He has learned that tricks don't kindle confidence in either the store or the merchandise and that mysterious blah does but one thing and that is baffle you and baffling anyone is not the best way to convert you into a customer. He has learned too that hocus-pocus, giddy effects and assorted tosh are no sure-fire buying incentives, that they may catch attention but do not hold it. Instead he uses color and line and copy in an almost scientific manner. Whatever he does is based on study and understanding of human reactions.

Below—A model kitchen display

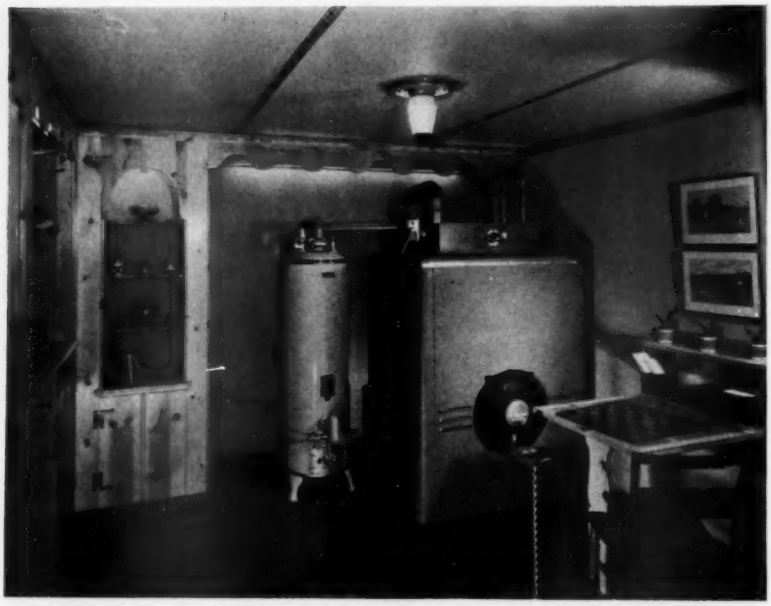
Colorful displays that have a poignant appeal to the passersby, reminding them of the beauty, comfort and economy of modern gas appliances

Passion of possession certainly rules the average mind, half the things we buy have no relation to either need or reason, or for that matter, common sense. I have never yet bought a necktie because I needed it. Most often I've bought it for the simple and most human of reasons—I wanted it! That's just it, the display should be a forceful reminder of something you want, need or ought to have. Often the merchandise is only a means to an end and incidental to the display—the display itself will remind you that you want comfort, beauty, diversion, relaxation or plain bolstering of your ego. We all like to own things and especially things that please our eye or make us seem more adequate.

Beauty as Sales Ally

Beauty, sheer beauty as sales stimuli has immense potentialities. The commercial use of beauty as a sales ally has only half begun. It is only recently that we have recognized this subtle but so forceful quality as a selling factor and put it to work for us. The desire for beauty is innate and the hunger for it is as real as the hunger for anything else. It is just as manifest in the savage of Timbuctoo as in the Lady of Lake Shore Drive, though each may have her own interpretation of it.

What beauty is or what it does has nothing to do with it, the desire for it is inborn and the clever merchant cultivates it to his advantage. Beauty makes value—beauty of presentation increases value and with beauty goes pride of possession. Skillful presentation of merchandise is now fully as important as skillful styling. No sales manager would think of placing a beautiful Gas range in the window unsupported by a good display any more than he would think of presenting his



Another model basement display of The Peoples Gas Light and Coke Co.

wife with a wrist watch in a brown paper bag.

Intimately associated with beauty or rather a form of it, is color. Actually we define objects by their color and our memory for color is far more highly developed than our memory for line and form. No one ever says, "Who was that girl with a square-cut neckline I saw you with," no, you say point blank, and more picturesquely, "Who was the dame in the red dress." Color makes a more definite and lasting impression and is therefore, a most important factor in good display. That women have a keener color sense than men is no secret. If you don't believe it, separate the ties your wife bought you from those you bought yourself and you have a very convincing, though disheartening proof.

Age of Appearance

I am more than certain that the logical display approach to women is via the route of color and beauty. In our business we have told the tale of mechanical perfection with justifiable pride over and over again. It is a stupendous story, but disappointing to say, only mildly interesting as far as most women are concerned. It never was nor ever will be the primary approach in selling women, this I say though I know that only a small per cent really know or have heard of the amazing performance of the Modern Gas appliance.

No one is surprised at seeing a car roll along the street, it is supposed to do so. So very few will marvel very long at the mechanical perfection of the gas appliance, its accomplishments will be taken for granted the second day it is in the house. We have ceased to marvel at mechanical achievements because they come too fast for us. But there is no limit to the marvel of beauty—especially if we meet it where not expected. When the table-top range was introduced, for every woman who said, "It cooks better," ten said, "It looks better." I can name, and so can you, some make of ranges which though mechanically superb, have little eye-appeal and therefore, languish in a corner of your salesroom.

I do not propose that the mechanical aspect of the range, refrigerator or any other appliance be ignored or dismissed in a few words, there is too much missionary work to be done for that, and too many competition claims to be answered, but I do think we can now afford, and have a right to put an accent on beauty, beyond that of saying, "Ain't it pretty." Our age is the age of appearance. We are selling to a style-conscious world where the question "What does it look like" is as important as the question "What does it do."

As a nation we have a trait seldom mentioned but ever so much in evidence—a trait a godsend to us who sell and that is our national inclination to discard and replace. In this trait lies progress. Progressive obsolescence borders on a mania with us. Very few stoves are discarded because one cannot cook on them, actually most of them are junked because they look out-of-date. And looks is what sells the range today quicker than any other single feature.

Today's gas appliance is a handsome piece of home furnishing and can rightfully be presented as such. Moreover, it is a piece of home furnishing that brings to the home, value and comfort above that of any other article. Think of the gas range alone—it does nearly everything but set the table.

Selling Happy Living

I like to think that we are not selling bolts and nuts and pipes and tin assembled together in objects presentable enough to be labelled ranges, refrigerators and so on, and an intangible something to be measured in the abstract word of therms. Actually we are in the business of selling attractive means for comfort, convenience, health, happy living, time and beauty—values everybody wants. Without our products the home could not be that which we know as home.

Our industry and associated manufacturers have done as much for the home as the car has done for transportation. The modern range, refrigerator and heating unit are objects in their design and function comparable to the automobile, airplane and streamlined train. Reflection will prove that the design of modern gas equipment is more attune to the machine age we live in than the very house it serves and largely because of this high reach in design can the home be served with the automatic efficiency demanded by our exacting age.

It has been said that our merchandise is difficult to display and cumbersome to talk about. I don't share the opinion. True, it is inarticulate and cannot fence for itself like a radio

or a bathing suit and therefore, more in need of intelligent display presentation but we have a world of things to show and thrilling things to talk about. There are, it seems to me, two fundamental appeals in talking kitchen appliances—the first Beauty of the appliance—the second, Beautiful foods. Both are excellent themes for Display, all else is secondary.

You can remember—and it wasn't way back either—when we proudly displayed and advertised the battleship construction of the range, the very tops in good display was to show the poor range dismembered and all its innards exposed to show its sturdy construction. We built and talked the range as an heirloom and did the job so well that we still have these indestructible objects in use today. Then it dawned on us that we could talk of Beauty and did it naively by placing a gorgeous slinky gal in all her evening finery oozing up to the range, it was supposed to mean something though any woman bright enough to use the range could see it was plain silly.

Appeal of Good Cooking

Today we do it differently and better—I hope. But still we do not say enough of beauty and not near enough of good cooking. I love food and so do millions of men, and for that matter, woman, and I'll never cease to sing the praise of those who, with their artistry, make food enjoyment one of the purest and possibly the most exquisite of pleasures. Certainly nothing gives you that top-of-the-world feeling as much as a satisfying meal. I don't believe a war could be started or a crime committed after a good dinner. If we applaud Kate Smith for a ditty we ought to rise and give Mrs. Brown a big hand for her perfect pumpkin pie.

Now display is not to be taken in the narrow sense of merely window display. It should be thought of as an activity of wider scope and far-reaching effects. Window displays should be supported by store interior displays designed for point-of-sale duty. The general sales office, the very mien of the store and the company quarters all are aspects of display. Display in all its forms is really the face you turn to the public and if the display job is done well, it is a clean, cheerful, smiling face you show your customers.

An experiment in display which has proven its value from every angle is that of environmental floor displays of model kitchens and basements. Every gas company now showing model rooms will endorse them enthusiastically as effective sales agencies and advertising features. In those shown by our company we elected to treat the gas appliances not as specialty objects but as real home furnishings and component parts of the rooms.

The kitchen today enjoys the same style importance as other parts of the home and this point has been forcefully portrayed in these actual rooms which are a never ending source of interest to the customers and a godsend to salesrooms poor in interesting features. In these displays we have succeeded in painting the kitchen and the basement as rooms of glamour. We have succeeded in proving that these rooms in the house need not be dour nor functionally frigid. These exhibits have opened new vistas for better kitchen and basement designs—kitchens and basements where the gas appliance looks its best and does its best.

To undertake any display program of success requires more than an appreciation of its value, more than the ability to carry it out—it requires an expenditure of funds, an expenditure apportioned as you apportion any other advertising budget. Until recently the average utility company's display budget has been equal to the purchase of a bag of peanuts and the result commensurate. The scope of display and its technique has changed very much in the last decade and it is impossible to tell a modern story by methods that were timely when the Cherry Sisters were in vogue.

If we are to merchandise as other stores we shall have to advertise and use display as other stores and to that end a reasonable display budget is a contributing factor.

The real problem of every merchant is that of creating acceptance and traffic. Business comes with traffic as surely as crackers come with soup. The glory of color, the Beauty and Brightness of Display is an essential part of every selling program. In the parade of business, display is the band that makes it fun to march along.

Gas Service in Los Angeles Unimpaired During Flood

REPORTING on flood conditions in Southern California, A. B. Macbeth, president of the Southern California Gas Company, Los Angeles, in a letter to Alexander Forward, managing director, A. G. A., summarized the situation as follows:

"This whole flood situation has been greatly exaggerated, which was not unnatural on account of the damage caused to communications and transportation, especially railroad transportation. On account of the topography of this country, the real damage is caused by rains in the mountains, north and east of the city, with water rushing down to the ocean, but within a day after the rains, all flood conditions are over.

"The damage to private property in the flood of March 2 and 3 was confined almost entirely to outlying and lowland areas with a great part of the flood loss consisting of destruction of public improvements and facilities of public carriers. Most of the bridges washed out were obsolete structures. No modern highway bridge was destroyed and at no time was metropolitan Los Angeles in danger and I don't believe it ever will be in danger from floods.

"On Saturday, the week of the flood, about 70,000 people attended the races and the race track was so dry it had to be sprinkled. This does not look to me very much like an injured city.

"As far as we were concerned, we maintained gas service in spite of losing several major transmission lines, in all metropolitan Los Angeles.

"In San Bernardino where the torrents came down from the mountains in great volumes, they did wash out the main trunk line transporting gas from the plant into the city. We had plenty of gas at the gas works and our pipe line between here and San Bernardino stayed in service, but we could not distribute. These towns were out for two and a half days only and were turned back on without any accidents. We have resolutions by all the major organizations in that part of southern California complimenting us on the work done in the restoration of service.

"The nicest thing about the whole incident is that the employees of the company to a man, no matter whether their job was in an office or out, went to the bat with the single idea of maintaining and restoring gas service and they did a grand job, in spite of the lack of communication and much impaired transportation facilities."

The Mystery Chef's Mailbag

Twice each week I hold cooking school after your broadcasts, for my daughter and nine of her classmates who are to be married in June. They make your recipes of the day. Do wish you could hear their shouts of joy when their goodies are ready to be eaten.

Mrs. C. F. J.
Baltimore, Md.

I have found your cook book to be the best I ever had. I have passed the word along to all my friends and relatives and they have thanked me for telling them about it. So now I pass their thanks along with mine to you and the gas companies that sponsor you. Last year my husband and I bought a Roper range and an Electrolux from our gas company.

Mrs. E. F. G.
Laguna Beach, Calif.

When my husband and small children ask in chorus "Is this a Mystery Chef recipe?" when I put an exceptionally good dish on the table, I am impelled to inquire further into your magic.

Mrs. W. D. M.
Edmonds, Wash.

I certainly do enjoy your programs and use your cook book exclusively. I have only been married a little over a year, but my husband thinks I'm a better cook than his Mother and better than mine. Isn't that an accomplishment?

Mrs. R. E. L.
Jamaica, N. Y.

Your radio talks and cook books have been a life-saver to me since my marriage nearly four years ago. To be perfectly frank I was a flop as far as preparing a meal was concerned, but I started following your programs, and well, I've had lots of praise but no complaints for a long time. You really do deserve "Thanks" a million times.

Mrs. E. L. S.
Somerville, Mass.

Your cook book has helped me tremendously. I have my own little family of five to cook for. I really enjoy cooking since I have had your book. It has the simple dishes one would use for youngsters and the fancier ones for entertaining. As I say to my friends, when using your book I feel as if you are right in my kitchen telling me what to do, so how could I help but be a good cook.

Mrs. J. A. S.
Waldwick, N. J.

My daughter is a bride of only four months. She knew little about cooking before she was married and just could not make pie. So I gave her your book "Be an Artist at the Gas Range." She followed your recipe and now makes delicious pies. At Christmas time she cooked dinner for ten people. I just thought I must tell you how proud I was of her dinner, thanks to your cook book, she says. Your "big" little book has done wonders for my daughter, also for myself.

Mrs. J. C. L.
Heppner, Ore.

I was married four years ago February 3. For a gift Mother gave me one of your cook books. Last week my house burned to the ground. We got absolutely nothing out of it My cousin was burned to death and my husband's hands were burned so that he will not be able to work again for some time. In the meantime I am going to try to get settled and take in boarders for a living. I can do this only if you can send me your cook book.

Mrs. G. H. F.
Berlin, N. Y.

I listen to you every time you are on the air. I was considered a very good cook but since I am using your recipes I am a wonder. My friends ask me where I get such delicious dishes. Do you know what I say? I am a Mystery Chef fan.

Mrs. L. M. T.
Buffalo, N. Y.

I have a daughter who has only been married three years. In those three years she has learned almost as much about cooking, with the aid of your book, as it took me to learn in twenty-five years. I have another daughter who is to be married this summer and I am sure she will be just as much of an artist at the gas range as her sister. With the aid of your cook book they need no further instructions from me.

Mrs. W. N.
Hollis, L. I., N. Y.

I have never used one of your recipes that has not turned out to be a wonderful treat to my family or friends. Even my nine year old daughter has excellent results from your cake recipes.

Mrs. A. S. A.
Gloversville, N. Y.

I use your cook book for all my cooking. I have destroyed all my other books. Don't have to use them with such a complete one as your book is.

Mrs. R. B.
Mechanicville, N. Y.

Have made so many of your wonderful recipes and found each and every one perfect and delicious. Please believe me when I say, words cannot express my thanks to you for your great help. Would not miss your broadcast for any appointment.

Miss G. S.
Glendale, L. I., N. Y.

Just a little thank you card for all the fine recipes and hints found in your book. If I used the largest sheet of writing paper I ever saw it could not tell you enough.

Mrs. W. McC.
Leominster, Mass.

I have been married for six years, but for this past year my sister did the cooking because of my being ill. I resumed cooking duties as soon as I became better. No matter what I cooked my husband complained. Well, it got to that stage where my husband started to eat out every night. I was heart broken, but one day I tuned on the radio and heard your voice stating that even a ten year old child could cook with your recipes. You can be sure I got one of your books soon after the broadcast and the following Sunday before my husband could go out, I had a splendid meal prepared. I cannot tell you what wonders I experienced when my husband told me that I really could cook.

Mrs. M. G.
Bronx, N. Y.

Your cook book is the finest ever. Every recipe turns out just as you say. No one can make a mistake if they follow your methods, either. I have told several people about the book and all are glad and appreciate it.

Miss H. A.
Portland, Ore.

I have long wanted to tell you that of all the dozens and dozens of cook books I

have, "Be an Artist at the Gas Range" is the most indispensible. Your radio talks give inspiration and make cooking an art instead of a drudgery.

Mrs. H. E. R.
Westfield, N. J.

Your cook book has been a great help and pleasure in preparing meals at home and we are very grateful for it. My husband loves to get the book out and study it whenever he feels a cooking mood coming on. He makes fine sauces and gravy in meat dishes.

Mrs. J. C.
Richmond Hill, L. I., N. Y.

I am a constant listener of your programs each week. My daughter began cooking with your book when she was ten years old. She claims she couldn't get along without it. She has won first place in baking in school and also has made a name for herself in the neighborhood. The credit goes to you, really, for she says that you said she could be a good cook.

Mrs. W. M.
Wethersfield, Conn.

Can't say I could use a card in the praise The Mystery Chef should have as there isn't room enough on any writing paper to say all I would like to say. Have never had a cook book as fine as yours, not only in the fine tasting dishes, but for the easy way of cooking. Anyone can cook if they have one of your cook books and follow the directions you give. Hoping we will hear your voice over the radio for a long, long time.

Mrs. K. G.
Orange, N. J.

If I had to get along with one cook book and only one, I would choose the one compiled by The Mystery Chef. It is the most comprehensive one I have ever seen, barring none and I have used many.

Mrs. G. G. C.
Snyder, N. Y.

I think you will be interested to learn how very much indebted I am to you. Last Spring my husband had a sudden breakdown. We were soon penniless, but most fortunately I obtained a position as cook in a small, very fine orphanage. My job was in the boys' cottage. They had suffered the ministrations of many so-called professional cooks who prepared their food in an "institutional" way—I think you understand what I mean. Having had no experience whatever in this sort of work, I nevertheless made a big success of it. Your "Be an Artist at the Gas Range" was my guide; every recipe, without exception, turned out perfectly. I just multiplied ingredients to meet my need, and did the boys enjoy the good meals! As they expressed it—"Oh, boy! real homemade food!" And so it was, and delicious too, thanks to your directions, my excellent big gas range and refrigerator.

Mrs. J. O. B.
Brooklyn, N. Y.

You are probably used to hearing testimonies like this but I really mean it when I say that every time someone says "This is delicious" I really feel guilty for taking the credit when it really belongs to you and your grand cook book.

Miss M. D.
Brooklyn, N. Y.

I have a new Quality gas range. I recently made a thirty-seven pound wedding cake and it was baked beautifully in my range. I have never used anything but a gas stove since I was married thirty-one years ago this June.

Mrs. M. A. M.
Worcester, Mass.

For many years I have wanted to write to you and tell you how much I personally enjoy your wonderful recipes and informal chats on the air. We have our own gas well. I use a gas stove and am trying to save to buy a gas refrigerator, the last word in refrigeration. A new gas range is on my shopping list.

Mrs. C. H.
Avon Lake, Ohio

I quite agree with all you say about the use of gas. The only fault I find with your program is that it always reminds me of what I am missing. We live where gas is not available and after having it for twelve years previously we can truly appreciate its convenience, low cost and flexibility of use.

Mrs. A. C. M. F.
Smithville, Ohio

I want to thank you for your marvelous cook book. I was always considered a good cook and was therefore amazed to find how much room for improvement there was in my technique. Since using your recipes, my meals are never monotonous and my family's health has improved also. I listen to you whenever I am able.

Mrs. M. L. B.
Floral Park, L. I., N. Y.

Your broadcasts are of the greatest interest to me and my many friends. We never miss one if possible to get to a radio. Thanks for all you have done for me. I really am today an excellent cook and owe my success entirely to your wonderful instructions and simple manner of making everything so good and so easy. Accept my good wishes for your happiness and prosperity.

Mrs. C. H. H.
Hartford, Conn.

Last April I secured your cook book "Be an Artist at the Gas Range." No words I can say will show the appreciation or tell you how much your book has helped me. Since I received your book I can honestly say the meals I have served have improved 100 per cent.

Mrs. R. R.
Augusta, Maine

While I am in my sixty-third year and have always been considered an excellent cook since I was a little girl, have never enjoyed cooking as much as I have since I have been using your wonderful cook book.

Mrs. K. McC.
Philadelphia, Pa.

I wish to take this opportunity to thank you for the wonderful work and help that you have bestowed on a young and inexperienced cook. You have done wonders for me and my husband is always glad to have his three meals at home now. When we were first married he would prefer eating out. I listen to your every broadcast.

Mrs. G. L.
Newport, R. I.

It recently became necessary for me to give up a stenographic position in order to take care of my invalid mother. I knew nothing whatever about the art of cooking but since securing your book "Be an Artist at the Gas Range," I have had wonderful success. I would like to express my appreciation for the great service you are rendering through my gas company.

Mrs. G. F.
Buffalo, N. Y.

To listen and enjoy your broadcasts without saying "Thank you" is the same as being a guest at a very lovely banquet and never expressing your appreciation. My husband discovered you some time ago and said "A man called the Mystery Chef is on the air and I believe you will like him as he leaves off all the frills and fuss and talks good food such as men like." I immediately secured your cook book and began using it. Never a failure. At least ten of my friends have secured your book and now mine is getting worn and spotted. You have certainly taken cooking out of the drudgery class and made one feel that the preparation of food is an art.

Mrs. J. R. B.
Canton, Ohio

I am saving since I got your Mystery Chef cook book. I would not part with it for anything. I have tried most of your recipes always with marvelous success.

Mrs. M. C.
Binghamton, N. Y.

I have your cook book and shall be forever grateful to you. I could go on and on praising different recipes from your wonderful book "Be an Artist at the Gas Range," for I have tried so many and each one has turned out perfect. Many thanks to you for this book.

Mrs. R. B.
Atlantic City, N. J.

I have your Mystery Chef cook book and I certainly think it the finest cook book I have ever used. Have had great success with all recipes and they are so good and *not* expensive.

Mrs. E. L.
Spokane, Wash.

38 McCarter Medals Awarded in 1937

THE Medal Awards Subcommittee of the Association's Accident Prevention Committee reported the awarding in 1937 of 38 McCarter Medals and one Bar to employees of member gas companies of the American Gas Association. These medals were presented with appropriate ceremonies during the year by officials of the employees' companies as awards for successful application of the Schafer Prone Pressure Method of artificial respiration to persons overcome by gas. A McCarter Bar is awarded to a person who has already received a McCarter Medal.

In addition to the medals, 12 certificates of assistance were awarded to employees who aided in the treatment of patients.

Following is a list of the recipients:

Bar

Louis Blackmann, The Brooklyn Union Gas Co.

Medals

Robert W. Wood, The Philadelphia Gas Works Co.
Jos. P. Tye, The Peoples Gas Light & Coke Co.
Louis N. Mastriano, Consolidated Edison Co. of N. Y., Inc.
Wm. McKinley Keephart, Public Service Electric & Gas Co.
Jeremiah Lawler, Consolidated Edison Co. of N. Y., Inc.
Richard P. Corcoran, The Peoples Gas Light & Coke Co.
Wm. F. McDonough, The Philadelphia Gas Works Co.
Fred Dupree, United Gas Public Service Co.
Louis Backmann, The Brooklyn Union Gas Co.
Geo. C. Temple, Kings County Lighting Co.
Wm. P. Witter, The Philadelphia Gas Works Co.
Elizabeth M. Dalton, Consolidated Edison Co. of N. Y., Inc.
Wm. O'Leary, The Brooklyn Union Gas Co.
Wm. Dengler, Consolidated Edison Co. of N. Y., Inc.
Joseph B. Brady, Consolidated Edison Co. of N. Y., Inc.
Harry V. Bennett, Consolidated Edison Co. of N. Y., Inc.
Patrick Graham, The Brooklyn Union Gas Co.
Charles Roberts, Public Service Electric & Gas Co.
Gerard M. Beegan, Consolidated Edison Co. of N. Y., Inc.
Wm. H. Nelson, The Ohio Fuel Gas Co.
J. S. Hanisco, The Philadelphia Gas Works Co.
Charles M. Hoffer, Public Service Co. of Northern Illinois.
H. W. Robbins, Central Indiana Gas Co.
S. Lesser, The Brooklyn Union Gas Co.
Thomas Neary, The Brooklyn Union Gas Co.
John G. Bartholomey, Consolidated Edison Co. of N. Y., Inc.
Joseph P. Lawson, The Brooklyn Union Gas Co.
Joseph G. Richie, Consolidated Edison Co. of N. Y., Inc.
Henry Schoenfeld, Consolidated Edison Co. of N. Y., Inc.
F. R. Ward, The Ohio Fuel Gas Co.
Claud R. Arnett, Monongahela West Penn Public Service Co.
Herbert Carter, The Philadelphia Gas Works Co.
Thomas Moore, The Brooklyn Union Gas Co.
David P. Flavin, Malden & Melrose Gas Light Co.
Charles D. Quinn, Consolidated Edison Co. of N. Y., Inc.
Anthony DeCanio, Consolidated Edison Co. of N. Y., Inc.
Edward R. Quinn, Consolidated Edison Co. of N. Y., Inc.
William J. Wylie, The Hartford Gas Co.

Certificates of Assistance

James K. Crampton, The Ohio Fuel Gas Co.
John P. Gormley, The Philadelphia Gas Works Co.
Patrick J. Sheehan, Consolidated Edison Co. of N. Y., Inc.
John H. Muller, Jr., Consolidated Edison Co. of N. Y., Inc.
Thomas E. Riddell, The Hartford Gas Co.
James Ryan, The Brooklyn Union Gas Co.
John J. McDonough, The Brooklyn Union Gas Co.
Patrick Lavan, The Brooklyn Union Gas Co.
C. E. Hartley, Central Indiana Gas Co.
E. L. Sinclair, United Gas Public Service Co.
T. M. Haire, United Gas Public Service Co.
George Woll, The Brooklyn Union Gas Co.

Purdue Research on Water Heaters

AN interesting engineering bulletin on "Automatic Gas-Fired, Storage-Type Water Heaters" has been published by Purdue University, Lafayette, Indiana. The author, J. M. Krappe, associate in Gas Engineering, was formerly associated with the American Gas Association.

A project of the Engineering Experiment Station, originally started by R. B. Leckie, formerly in charge of the Gas Engineering Department, the bulletin discusses the various factors affecting the operating costs of different types of heaters. The conclusions may be summed up briefly as follows:

Increased use of hot water improves heater efficiency so that the cost per gallon of this additional hot water is reduced.

The selection of the proper size of water heater is an important factor in operating costs.

For a daily usage of 40 or 50 gallons of hot water the stand-by loss plays an important part in determining overall efficiency.

The cost of gas for heating water is considerably less than most people realize.

The low-demand water heater is slightly more efficient than the quick recovery heater, due to a lower flue gas temperature.

Considerable improvement has been made in the design of heaters and further improvement is possible.

More effective insulation and reduced heating space increase the thermal efficiency.

Improvement in the rate of heat transfer will reduce the amount of heating surface required.

More sensitive snap-action thermostats would improve temperature regulation.

In general the best points for attention in improving gas-fired storage heaters are the reduction of the heat content of the flue gases and the reduction of the standby loss.

This publication should be of interest to all manufacturers of water heaters concerned with improving the efficiency and performance of their products. Copies are available from Purdue University, Lafayette, Indiana, at twenty-five cents each.

Gasoline from Coal

COAL will substitute for oil in making gasoline, but it is expensive.

Arno C. Fieldner, expert of the Bureau of Mines, told a House Appropriations Subcommittee that motor fuel made from coal in commercial quantities would cost between 15 and 25 cents a gallon.

Extensive experiments, he said, are being made by the Bureau of Mines in converting both bituminous and lignite coal into motor fuel.

Drama of Natural Gas to Unfold in New Orleans, May 9-12

Heads of committees which met in Dallas recently to plan for the Natural Gas Convention. First row, left to right: Eugene D. Milener, secretary, Industrial Gas Section; Chester L. May, past president, Southern Gas Association; Jay C. Barnes, chairman, General Arrangements Committee; H. E. Meade, chairman, Convention Program Committee; Robert W. Hendee, chairman, Natural Gas Department; Streuby L. Drumm, chairman, Convention Housing Committee. Back row: E. H. Poe, secretary, Natural Gas Department; L. L. Baxter, chairman, Southern-Southwestern Sales Conference; W. G. Wiegel, chairman, Subcommittee on Domestic Sales; A. L. Forbes, Jr., chairman, Transmission Committee; W. Jennings Young, chairman, Production Committee; W. T. Harter, chairman, Publicity Committee; and J. V. Strange, chairman, Regional Committee, National Advertising Program

THE dramatic kaleidoscope of America's natural gas service from producing sand to the consumer's burner tip, will be unfolded in New Orleans May 9-12 at the annual convention of the Natural Gas Department of the American Gas Association. Four interest-packed days await delegates and visitors from the entire continent.

Prominent Speakers

Interesting general sessions, with nationally prominent speakers, will be presided over by Robert W. Hendee of Colorado Springs, Colo., chairman of the Natural Gas Department, and by Thomas R. Weymouth, New York, vice-chairman of the Department.

The Program Committee headed by H. E. Meade, of New Orleans, has completed one of the most constructive and all-inclusive programs in the history of the natural gas industry. It is hoped that this meeting will be the beginning of a new era of accomplishment in an already full grown and successful industry. The bringing up to date on every phase of the business of

By E. H. POE

Secretary, Natural Gas Department

those interested in natural gas is the goal and duty of the Association. This is possible through cooperative effort of the various committees culminating in these conventions and committee meetings. The New Orleans program is replete in forward looking papers and addresses.

The Production Committee Program under the direction of Chairman W. Jennings Young of Tulsa, Okla., will be outstanding in its coverage of every phase of drilling, producing and conservation of natural gas.

Research and technical problems will be presented by the Main Technical and Research Committee under the chairmanship of H. C. Cooper of Pittsburgh, Pa. Subcommittee reports will be submitted bringing delegates the latest developments.

All the new developments in transmission will be completely covered by outstanding executives and experts under the chairmanship of A. L. Forbes, Jr., of El Paso, Tex.

"Our Job Is a Selling Job" being the slogan of the meeting, Chairman Hugh Cuthrell of Brooklyn, New York, in collaboration with members of the Sales and Utilization Committee, has worked out an outstanding program on sales of domestic, commercial and industrial gas. This will include analyses of the markets, sales promotion, national activities, gas-equipped homes and every other phase of selling and utilization of gas.

Liquefied petroleum gas sales methods will be thoroughly developed in a special symposium. Advertising, accounting and valuation problems have a prominent spot on the program.

Many other timely and interesting subjects, some of which are being presented to the industry for the first time, will also be on the program.

The meetings and sessions have been arranged so as to give delegates time to take advantage of the many things to see and do while in New Orleans. The Entertainment Committee has worked out a program that will appeal to the delegates and their ladies

(Continued on page 159)

Derivation of a New Basis for Sizing Gas House Heaters

By STANFORD SETCHELL
American Gas Association

ONE of the most important problems confronting house heating departments is the determination of the proper capacity of gas heating equipment for a given house. The heating unit must have output capacity greater than the heat losses of the house under its design conditions in order to provide for quick heating and to take care of the load imposed by heat losses from the uninsulated ducts or pipes in exposed walls of the house. Naturally, the selection of correct size equipment is based upon the coldest sustained weather which it must meet. This results in operation at less than 100% capacity for the balance of the season.

The heating engineer is thus faced with the dilemma that while oversized equipment provides quick response and thoroughly adequate heating, it will, at the same time, sacrifice some efficiency because of operation at part load. On the other hand, too small a plant would never give proper service.

Information gathered by the Subcommittee on Engineering Handbook showed that the climate, cost of gas, and other influences have led to the adoption of a great variety of methods for sizing equipment which cannot be reconciled on scientific grounds. Using this information, a series of factors for various types of gas heating systems were developed. These represent the consensus of the committee.

The factors are multipliers which can be applied to the estimated hourly heat loss of a building; the product gives the recommended input to the gas boiler, furnace or conversion burner.

Appliance input ratings are most satisfactory for sizing equipment since the proper input in B.t.u. per hour for all gas heating appliances is shown both in catalogs and on the name plate of the appliance.

This article is intended to show the derivation of a new basis for sizing gas house heating equipment. It is used in Chapter V in the House Heating Handbook to be issued approximately April 20 by the American Gas Association. The basic facts used in developing this material were compiled by the Subcommittee on Engineering Handbook, of the Commercial Section, C. G. Segeler, Chairman, from data supplied by representative gas companies and gas equipment manufacturers.

Figure I shows these selection factors plotted against the heat loss of the house. The factor for each type of system is shown as a single line having its maximum value for houses with an hourly heat loss less than 25,000 B.t.u., a minimum value for houses with over 200,000 B.t.u. per hour heat loss, and proportionate values between. The difference between this input and the heat loss of the house is the amount available to take care of the radiation and flue losses from the appliance, the losses from exposed piping or ducts, and the reserve needed for quick pick-up. The efficiencies assumed and the factors allotted for piping and pick-up are shown in Table 1.

The efficiencies given for gas-designed equipment are those used by the A. G. A. Testing Laboratories in determining output ratings. Converted equipment was considered to have an efficiency 5% lower than gas-designed jobs.

The allowance for piping and pick-up is less for the larger size houses, since the piping is a smaller part of the total load.

While this chart is the basis for sizing gas heating equipment, it is not convenient for the house heating salesman to use. A series of tables has been set up, based on the factors shown on the chart. Unfortunately, space does not permit reproducing the complete tables. Portions of several tables will be shown, however, to illustrate their development and use.

A section of the table for selecting gas designed steam boilers is shown in Table 2.

This table is developed as follows: Take, for example, the column headed by the figure 200. This represents a house having a heat loss of 200,000 B.t.u./hr. If we look on Figure 1 at the curve marked "Gas designed accelerated hot water and steam," we find that the factor for a house having a heat loss of 200,000 B.t.u. per hour is 1.7. Multiply this factor by the heat loss of the house to obtain the proper input to the boiler.

200,000 × 1.7 = 340,000 B.t.u. per hour

Multiply the input to the boiler by the efficiency (obtained from Table 1) to get the output.

340,000 × 80% = 272,000 B.t.u. per hour

The A. G. A. boiler rating in square feet of steam is the boiler output in B.t.u. per hour divided by 240. Thus,

$$\frac{272,000}{240} = 1133 \text{ sq.ft. of steam radiation}$$

The amount of radiation required in a house is equal to the B.t.u. heat loss of the house divided by 240.

$$\frac{200,000}{240} = 834 \text{ sq.ft. of steam radiation}$$

This figure 240 is the heat emission in B.t.u. per hour of a square foot of direct cast iron radiation.

This table is used as follows: Suppose

TABLE 1
PERCENTAGES USED IN CONSTRUCTING FIGURE I

Type of System	*Efficiency of Boiler or Furnace*	*Piping and Pickup Allowance in Per Cent of Heat Loss of House**	
		Houses with Heat Losses at or below 25 M B.t.u./Hr.	*Houses with Heat Losses at or above 200 M B.t.u./Hr.*
Gas Designed			
Steam Accelerated Hot Water	80%	60%	36%
Gravity Hot Water	80%	68%	44%
Forced Warm Air	80%	28%	20%
Gravity Warm Air	75%	28%	20%
Converted			
Steam Accelerated Hot Water	75%	58%	35%
Gravity Hot Water	75%	65%	43%
Forced Warm Air	75%	28%	20%
Gravity Warm Air	70%	26%	19%

* Intermediate sizes are between the values shown.

TABLE 2
GAS-DESIGNED STEAM BOILERS
(Part of a complete table to be used in the new Handbook)

Heat Loss of House, M B.t.u./Hr.	*180*	*190*	*200*	*Equation Used to Set up Table*
Sq.Ft. of Radiation, Steam	750	792	834	Heat Loss of House ÷ 240
A. G. A. Boiler Rating, Sq.Ft. of Steam	1042	1089	1133	Boiler Output ÷ 240
Boiler Output,—M B.t.u./Hr.	250	261	272	0.8 × Boiler Input
Boiler Input, M B.t.u./Hr.	312	326	340	Factor from Fig. 1 × Heat Loss of House

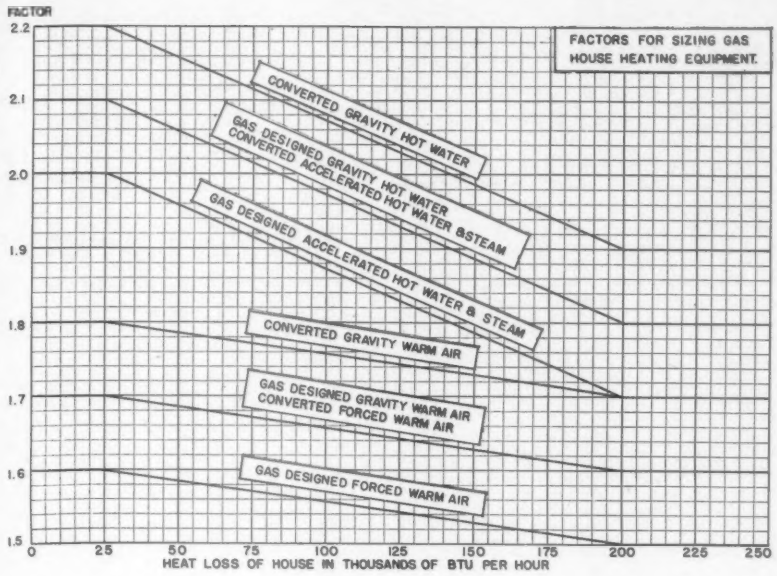


Figure 1

that we wished to know the size of gas-designed steam boiler for a house having an hourly heat loss of 180,000 B.t.u. In Table 2, the column headed by the figure 180 shows that we should use a boiler having an input of 312,000 B.t.u. per hour and an A. G. A. rating of 1042 sq.ft. of steam. This column also shows that the installed radiation should total 750 sq.ft.

This table can also be used if we do not know the heat loss of the house but know simply the sq.ft. of radiation installed. For example, if we had a house with 792 sq.ft. of installed direct cast-iron radiation, we would look in Table 2 along the line—"Square Feet of Radiation, Steam," until we came to the figure 792. This is in the column shown for a house with a heat loss of 190,000 B.t.u. per hour. This column shows that the required boiler would have an input of 326,000 B.t.u. per hour and an A. G. A. rating of 1089 sq.ft. of steam.

If the amount of radiation installed in a steam system exceeds that shown in the table for the heat loss of the house in question, the boiler should be sized to correspond to the installed radiation. This is necessary so that the boiler will be able to pick up the condensing load of the excess radiation.

For hot water systems with radiation exceeding that shown in the tables, the boiler should be selected on the basis of the heat loss of the house. This "excessive" radiation will simply operate at a lower temperature than that assumed in deriving the tables, and no additional pick-up load is imposed on the boiler.

With either type of system, if the radiation is less than the figure shown, the boiler should be selected on the basis of the heat loss of the house. The boiler must be able to take care of the heat loss of the house. Additional radiation should be recommended to insure proper heating.

For hot water systems, installing a circulator and increasing the water temperature may take the place of additional radiation, since this procedure increases the rate of emission of the radiation.

Conversion Burners

For conversion burners, it is necessary to check the amount of installed radiation and the size of the existing boiler or furnace. These two factors will then influence the selection of the proper size conversion burner. A sample of the table for converted gravity hot water systems is shown as Table 3, as an illustration of the treatment followed in the new Handbook.

This table is derived as follows: Take, for example, a house having a heat loss of 180,000 B.t.u. per hour. On Figure I, the curve marked "Converted Gravity Hot Water" gives a factor of 1.935 for this size of house. Multiplying the heat loss of the house by this factor gives the input to the conversion burner in B.t.u. per hour. $180,000 \times 1.935 = 348,000$ B.t.u. per hour. Multiplying the input by the efficiency of the converted boiler (from Table 1) gives the output of the boiler.

$348,000 \times 0.75 = 261,000$ B.t.u. per hour

The heat emission of 1 sq.ft. of standard cast-iron hot water radiation is taken as 150 B.t.u. per hour. The output or Steel Heating Boiler Institute (SHBI) rating of a hot water boiler equals the B.t.u. output per hour divided by 150.

$\frac{261,000}{150} = 1740$ sq.ft. of hot water radiation

This rating represents the amount of radiation which the boiler could carry, assuming the radiation to be connected directly to the boiler nozzle with no allowance for piping or pick-up.

The EDR, or equivalent direct radiation rating of the boiler, equals the boiler output in B.t.u. per hour divided by (150×1.20).

$\frac{261.000}{150 \times 1.20} = 1450$ sq.ft. of hot water radiation

This figure represents the number of sq.ft. of direct cast iron hot water radiation which the boiler could carry steadily, assuming that the losses from piping amount to 20% of the heat emission of the radiation. No allowance is made for pick-up.

The Heating, Piping, and Air Conditioning Contractors National Association (HP&ACCNA) load rating is obtained by dividing the heat loss of the house by 240.

$\frac{180,000}{240} = 750$ sq.ft. of steam radiation

(Note that HP&ACCNA use steam ratings)

This rating shows the number of sq.ft. of installed direct cast iron *steam* radiation which the boiler will supply including piping and pick-up loads. These ratings are determined by the HP&ACCNA and are published by them. They do not publish ratings in terms of sq.ft. of hot water radiation but use the ratings based on sq.ft. of steam for both steam and hot water boilers.

The sq.ft. of radiation required for the house is given by dividing the heat loss of the house by the emission of a sq.ft. of direct cast iron hot water radiation.

$\frac{180,000}{150} = 1200$ sq.ft. of hot water radiation

A problem will help to show the use of this table. Assume that we have a house with a heat loss of 200,000 B.t.u. per hour, 1333 sq.ft. of direct cast iron gravity hot water radiation installed and a coal boiler with an EDR rating of 1583 sq.ft. of hot

TABLE 3

CONVERSION BURNERS IN GRAVITY HOT WATER COAL BOILERS

Heat Loss of House, M B.t.u./Hr.	*180*	*190*	*200*	*Equation Used to Set Up Table*
Sq.Ft. of Radiation	1200	1267	1333	Heat Loss of House ÷ 150
HP and ACCNA Load Rating sq.ft. of steam	750	792	834	Heat Loss of House ÷ 240
EDR Rating Sq.Ft. of Hot Water	1450	1518	1583	Boiler Output ÷ (150 × 1.20)
Output or SHBI Rating Sq.Ft. of Hot Water	1740	1820	1900	Boiler Output ÷ 150
Boiler Output, M B.t.u./Hr.	261	273	285	0.75 × Boiler Input
Burner Input, M B.t.u./Hr.	348	364	380	Factor from Fig. 1 × Heat Loss of House

TABLE 4

CONVERSION BURNERS IN COAL BOILERS

Condition	*Procedure*
Case 1. Boiler too small	Recommend installation of new boiler.
Case 2. Boiler proper size	Recommend additional radiation, or for a hot water system add a circulator and use a higher water temperature. Use burner input corresponding to heat loss of house.
A. Radiation smaller than recommended	
B. Radiation correct	Use burner input corresponding to heat loss of house.
C. Radiation larger than recommended	Use burner input corresponding to radiation for steam. Use burner input corresponding to heat loss of house for hot water.
Case 3. Boiler larger than recommended	Recommend additional radiation, or for a hot water system add a circulator and use a higher water temperature. Use burner input corresponding to boiler size.
A. Radiation smaller than recommended	
B. Radiation correct	Use burner input corresponding to boiler size.
C. Radiation larger than recommended	For a steam system, use burner input corresponding to radiation or boiler size, whichever is larger. For a hot water system, use burner input corresponding to boiler size.

TABLE 5

CONVERSION BURNERS IN COAL FURNACES

Condition	*Procedure*
Case 1. Furnace too small	Recommend installation of new furnace.
Case 2. Furnace proper size	Use burner input corresponding to heat loss of house.
Case 3. Furnace larger than recommended	Use burner input corresponding to heat loss of house.

water. The column in Table 3 for a house having a heat loss of 200,000 B.t.u. per hour shows that this house has the proper amount of radiation and the proper size of coal boiler installed. This table shows that the conversion burner to be installed should have an input rating of 380,000 B.t.u. per hour.

In the case of conversion equipment, a greater variety of possible combinations is met with than in the case of gas designed equipment. The proper procedure in these various cases is shown in Table 4 and 5.

The tables given in Chapter V of the Engineering Handbook are worked up on the basis explained above, but they take care of the ten different types of systems for which factors are shown in Figure 1, and houses with heat losses from 10 to 200 thousand B.t.u. per hour.

Of course, certain special conditions may require alteration of these factors. Among these might be mentioned the size and shape of firebox into which a conversion burner is to fit, the grate area of the coal boiler being converted, the use of a plain thermostat, the presence of an auxiliary water heater, and intermittent heating. The rate of getting up steam, or producing hot water or warm air, should also be considered.

The method of sizing gas heating equipment outlined in this article will result in installations entirely adequate to meet the most severe demands placed upon them without being of such excessive size as to cause undue fuel consumption. By setting up this information in the form of tables, it is in a very convenient form to use. Knowing the heat loss of the house, the selection of radiation, boiler or furnace size, and burner input, is merely a matter of looking at the right place in the tables.

It is the sincere hope of the committee that this material will be found of value in simplifying this important problem which continually confronts all those engaged in selling and installing gas house heating equipment.

Servel Again Sponsors "March of Time"

TO aid gas companies in selling gas-operated refrigerators, Servel, Inc., will again sponsor the "March of Time," one of the most popular nation-wide radio programs, beginning April 7 and concluding June 30, according to an announcement from George S. Jones, Jr., vice-president and general sales manager of the company. This is the second consecutive year in which the "March of Time" has been sponsored by Servel, Inc.

Last year, the "March of Time" program tied-in with a gas refrigeration selling campaign during April, May and June. This year again, the broadcast is timed with a similar campaign, the "Make-Every-Minute-Count" or "Grandfather Clock" contest, in which hundreds of gas utilities throughout the nation will compete for awards.

Since its introduction to the American radio audience in 1931, the "March of Time" has continued in popularity. Polls conducted by competent radio authorities show that the broadcast has continued to maintain a higher and higher listener interest.

1938 Residential Building Gain Reverses 7-Year Trend

THE American Builder announces that the number and dollar value of residential building contracts awarded during February exceeded January, 1938. Contracts for January, in 37 eastern states, as reported by F. W. Dodge Corp., totalled $36,207,000, and increased to $40,023,000 in February. This is the first time since 1931 that the January-February residential volume has increased, reversing a seven-year trend.

Further indications of increased building activity are found in the number and dollar value of mortgages selected for FHA appraisal. This mortgage volume consistently has proved an accurate barometer of home building activity. The number of mortgages on one- to four-family dwellings has gained steadily since the first week of January. Weekly totals were below the corresponding periods of last year throughout January, but shot ahead during the week ended February 26, as shown by the following table:

Week Ending	*Week Ending 1938*		*Corresponding Week 1937*	
	Number	*Amount*	*Number*	*Amount*
Jan. 8	1,256	$ 5,483,184	1,967	$ 8,565,550
Jan. 15	1,504	6,531,200	2,286	9,556,860
Jan. 22	1,711	7,299,975	2,167	9,447,127
Jan. 29	1,888	8,150,840	2,272	10,091,713
Feb. 5	1,982	8,571,895	2,306	9,721,165
Feb. 12	1,988	8,787,105	2,701	11,068,008
Feb. 19	2,219	10,025,800	2,765	11,764,089
Feb. 26	2,775	13,100,250	2,835	11,747,954

Consumer Contest for Gas Companies

A UNIQUE contest in which the prize is a complete Monel kitchen has been announced jointly by The International Nickel Company, Inc., and its manufacturing subsidiary, Whitehead Metal Products Company, Inc., to all gas companies.

With the purchase by a utility of a Monel kitchen and background for showroom display, a duplicate set of kitchen equipment will be given free. This kitchen is to be used by the company purchasing the display as an award in a consumer contest.

Appropriate advertising mats, window trim, consumer literature, contest blanks are supplied without charge.

This type of promotion is designed to arouse the interest of an entire community to create store traffic, to build up a valuable list of prospects, and to give the dealer a year-round display.

Little skill is involved in the contest. The entrant need not purchase merchandise to become eligible.

Heating Installations

GAS heating installations in January in the territory of Consolidated Edison Co. of New York had an increase of 27 per cent compared with January of 1937, and water heaters an increase of 66 per cent over the sales in January of last year. In 1937 gas heating installations increased 14 per cent over those made in 1936, and installations of gas water heaters increased 16 per cent over those made in the year before.

No Affiliation

IN connection with an announcement in the March A. G. A. MONTHLY of the appointment of Colonel George A. Burrell as president of the Atlantic States Gas Company, Inc., it was erroneously stated that the Atlantic States Gas Company was a subsidiary of Commonwealth and Southern Corporation. This is incorrect as there is no connection between the two companies.

Gas Hits New Peak in New Jersey

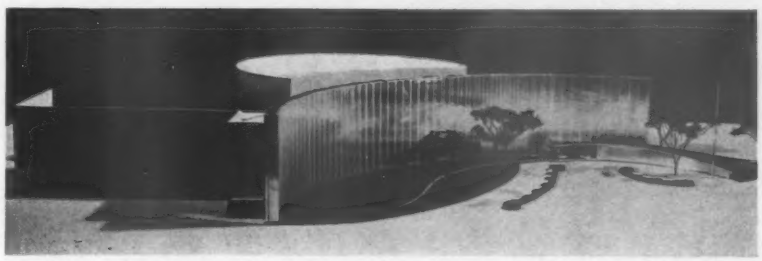
SALES of gas for building heating in the territory of the Public Service Corporation of New Jersey were the largest at the end of 1937 since the company began to acquire this type of load building business. In 1937 an increase of 357,991,200 cubic feet or 22.40 per cent were sold over the amount in 1936. Definite progress was made not only in introducing gas burning equipment in new homes but in dealer cooperation. The company's relations with the heating and plumbing trade were further strengthened and the year was marked by interesting the specialty dealer in this modern method of heating homes.

During the year building heating installations increased 1,803 as compared with 1,573 in 1936. On December 31 there were 6,770 buildings heated with gas supplied from Public Service System mains.

The dollar volume of gas appliance sales was the largest in the history of the company. They amounted to $3,479,135.26, a gain of 17.69 per cent over 1936. Outstanding in appliance sales were gas automatic water heaters, numbering 10,195, or 50.48 per cent more than in the previous year. New high records were also made in the sale of gas refrigerators, the number being 7,223, an increase of 19.84 per cent. Gas ranges sold were 19,241, an increase of 1,407.

Gas meters in service December 31 totalled 830,593, a gain of 9,798.

Largest Utility Starts New York Fair Building



Consolidated Edison exhibit building

GROUND was broken for the exhibition building of the Consolidated Edison Company of New York, Inc., and affiliated companies, at the Flushing Meadows site of the New York World's Fair 1939 on March 10. In the presence of World's Fair and public utility executives, the building's first pile was driven at a signal from Floyd L. Carlisle, chairman of the company's board of trustees and a member of the fair's board of governors. Grover A. Whalen, president of the fair corporation and George McAneny, chairman of the fair's board of directors participated in the ceremony.

Occupying a ground space of 75,000 square feet in the fair's Means of Production Zone, the Consolidated Edison building will front on an avenue curving eastward from the Theme Center, the heart of the fair's main exhibition area. Adjacent will be the Mining and Metallurgical, Petroleum, U. S. Steel Subsidiaries, E. I. duPont de Nemours & Co., and Chemical and Plastics buildings, while the spectacular Perisphere and Trylon structures will rise nearby. Not far removed will be the mile long $60,000,000 Central Mall, termed by fair officials the most elaborate artistic project in the history of the expositions.

Designed by Harrison and Fouilhoux, who designed the Perisphere and Trylon, the exposition's dominant architectural group, the Consolidated Edison structure will house a sequence of exhibits intended to illustrate the influence of gas, electricity, and steam on the broad panorama of life in the metropolitan area. The exhibits, designed by Walter Dorwin Teague, a member of the fair's Board of Design, will cover every important phase of community life influenced by utility services. The A. L. Hartridge Company, Inc., will erect the building.

Consolidated Edison officials engaged in the system fair program include Clarence L. Law, executive assistant to the vice-chairman of the board; Harold S. Sutton, executive assistant to the chairman of the board, and Henry Obermeyer, assistant vice-president. Associated with these committeemen are R. M. Martin, art director, advertising department, and A. W. Stark, engineer of commercial buildings.

Statistics suggest the effectiveness with which the New York utility can dramatize its position in the community. Reporting 2,541,416 electric meters, 1,283,995 gas meters and 3,277 steam meters on their lines, Consolidated Edison System companies serve the largest single system customer groups of their kind in the world. Electric service is supplied a population of 7,844,000 in the Manhattan, Brooklyn, Bronx and Queens boroughs of New York City, and in Westchester County. Electricity has been furnished by Consolidated Edison and its predecessors since construction of Thomas A. Edison's Pearl Street plant, the first U. S. incandescent service central station, in 1882. Gas has been supplied for more than 110 years by Consolidated Edison. Steam has been distributed in Manhattan by the New York Steam Corporation, an affiliate, for fifty-six years.

Personal and Otherwise

Brooklyn Union Re-elects Clifford Paige

Clifford E. Paige

CLIFFORD E. PAIGE was re-elected president of The Brooklyn Union Gas Company, March 10, at an organization meeting of the board of directors. Mr. Paige, a past president of the American Gas Association, has been president of the company since April 25, 1935. His re-election as president followed the annual meeting of the stockholders by a week at which a resolution of confidence in the management was adopted.

President Paige, at the stockholders' meeting, reported a phenomenal sale of $3,600,000 of gas appliances last year. He also pointed out that sendout of gas for the first two months of this year was 10% ahead of last year. He declined to predict future dividend policy, but stated that no business could stand constant tax increases.

There were present in person or by proxy more than 5,000 shareholders who voted 73.6% of the company's stock in favor of the present management. Last year 72.7% of the stock was represented. The stockholders passed the following resolution of confidence in the management:

RESOLVED, that the stockholders present wish to express their approval of the actions of the directors and officers of the company and extend a vote of confidence to Clifford E. Paige in his management of the affairs of the company.

Gas Man First to Enter Architectural Contest

AN employee of a gas company has the distinction of being the first to enter the nation-wide architectural competition sponsored by the American Gas Association for the design of all-gas "Liberty Homes." This unique honor goes to Raymond F. Halen who has been employed in the distribution department of The Manufacturers Light and Heat Company, Pittsburgh, Pa., since 1934.

Mr. Halen studied architecture for two years at Notre Dame University, then transferred to Carnegie Institute of Technology for three more years of study, finishing there in 1934. During his work in the distribution department he has been in contact with residential and industrial gas consumption, appliance merchandising and house heating.

Following announcement of the contest in the March issues of architectural magazines, hundreds of entries poured into the office of Home Appliance Planning Bureau of the Association.

Honored by Guild of Gas Managers

Walter F. Norton, pictured when he first became treasurer of the Guild of Gas Managers 25 years ago, and today—still treasurer

MEMBERS of the Guild of Gas Managers paid tribute at Boston's famed Parker House, March 12, to a man who has been a member for 40 years of the organization's 58 years of existence and who has served continuously as treasurer for the past 25 years—Walter Foster Norton, district manager of the Public Service Co. of New Hampshire, Nashua.

As a memento of the occasion Mr. Norton was presented with a full set of Bobby Jones golf clubs, a golf bag, zipper bag for golf clothes, and several dozen golf balls. The presentation was made by Robert H. Patterson, vice-president and general manager of the Lawrence Gas and Electric Co., who is president of the Guild. Speaker at the meeting was Clifford E. Paige, president of The Brooklyn Union Gas Company.

Mr. Norton has been engaged in the gas and electric business in Nashua since graduating from High School in 1890. He entered the employ of the Nashua Light, Heat and Power Co. that year and in 1897 was named manager of the gas department. Three generations of the Norton family have been engaged in the public utility business: his father, Alfred L. Norton, Mr. Norton and his brother, and Mr. Norton's son, Alfred M. Norton.

More people are killed by soot than by motor cars.—SIR PHILIP DAWSON at the Joint Gas Conference at the British Industries Fair, Birmingham, March 2, 1938.

Washington Creates Air Conditioning Bureau

ACCELERATED demand for gas air conditioning, particularly for newly constructed low cost houses, has caused the Washington Gas Light Company to intensify its activity in that field. H. M. Brundage, general sales manager, has announced the creation of an Air Conditioning Division for the purpose of exploring, developing and selling to the small home market, which is rapidly growing in the Capital City.

It is the purpose of the Washington utility to insure minimum standards in the design and installation of systems which will safeguard the public's present confidence in gas as a perfect fuel. In charge of this important department is B. K. Slaughter, who for several years has been directing all new construction activities as supervisor of the Promotional Division. Assisting him is Edmund H. Lloyd, graduate engineer of several years' air conditioning experience with the Washington company.

The Promotional Division will continue its diversified program under the leadership of James E. West, who for some years successfully managed the new mains and services division.

Candid Camera Fan

AMONG the camera fans with the chamber of commerce Good Neighbor Special to Mexico City, March 5-16 was L. B. Denning, president of Lone Star Gas Company, and past president, American Gas Association. Before taking the trip, Mr. Denning took an intensive course of instruction from one of his company employees in the operation of a miniature camera he purchased last summer in Switzerland.

H. L. Doherty Named to College Board

HENRY L. DOHERTY, president of Cities Service Company, and one of the most widely known utility executives in the United States, has been elected to Temple University's board of trustees. Mr. Doherty recently received the Anthony F. Lucas Gold Medal for distinguished achievement in improving the practice of finding and producing petroleum. In June, 1931, the honorary degree of Doctor of Engineering was presented to him by Lehigh University in recognition of his contribution to the art and science of gas, electric and petroleum production, distribution and utilization. He has received many other honors.

Agee Joins A. G. A. E. M.

R. S. Agee

R. S. AGEE, of Washington, D. C., has been appointed by the Association of Gas Appliance and Equipment Manufacturers to the position of promotional sales manager.

His immediate attention will be given to planning the program for coming nation-wide promotion of the modern gas range through a coordinated drive by manufacturers, utility companies and dealers.

Mr. Agee goes to the Association from the Washington Gas Light Company, where for the past three years he has served as sales promotion manager. During that period he made many unique contributions in utility and dealer sales plans. He also has won nation-wide recognition through his addresses before national and sectional utility conferences.

Born in the heart of the natural gas fields in Quinton, Oklahoma, in 1906, Mr. Agee's earliest merchandising experience was obtained as a salesman of gas ranges and space heaters in that section. He will move to New York City to assume his new duties about April 1.

McCarter Medal Awarded

HERBERT CARTER, senior fitter, The Philadelphia Gas Works Company, was recently awarded a McCarter Medal and Certificate for his achievement in life saving by the Schafer prone pressure method of resuscitation. Mr. Carter received the award from Conrad N. Lauer, president of the company, at a special staff meeting. Prior to the presentation, H. D. Lehman, manager of the customers' service department, read the citation of the act for which Mr. Carter was so singularly honored.

John A. Fry Heads Program Group

MERRILL N. DAVIS of Bradford, Pa., president of the Association of Gas Appliance and Equipment Manufacturers, has announced the appointment of the following program committee for the Association's annual convention to be held at The Greenbrier, White Sulphur Springs, W. Va., May 25-27:

John A. Fry, president of the Detroit-Michigan Stove Co., Detroit, chairman; W. J. Bailey, president, Day & Night Heater Co., Ltd., Monrovia, Calif.; F. W. Carter, president, Peerless Manufacturing Corp., Louisville, Ky.; J. F. Donnelly, sales manager, Gas & Electric Heater Co., La Porte, Ind.; L. R. Mendelson, president, Hotstream Heater Co., Cleveland; F. H. Ramage, assistant sales promotion manager, Republic Steel Corp., Cleveland; W. F. Roberts, president, Standard Gas Equipment Corp., Baltimore, Md.; F. E. Sellman, vice-president, Servel, Inc., New York; J. Van Norden, representing the American Meter Co., New York, and H. A. Wilson, president, The H. A. Wilson Co., Newark, N. J.

Authorities in the fields of economics, science, commerce and retailing will speak at the convention.

Virgil Kennedy Dies

VIRGIL W. KENNEDY, head of the department of domestic sales of the Florida Public Service Co., Orlando, died February 17. Mr. Kennedy had been an employee of the company for the past ten years. He was a member of the American Gas Association and a past president of the Florida Gas Meters Association.

Wisconsin Executive Changes

SEVERAL changes in officers of Wisconsin Public Service Corporation were voted at a meeting of the board of directors February 24, according to J. P. Pulliam, president.

C. E. Kohlhepp, vice-president and treasurer, was elected vice-president and controller of the company; D. W. Faber, formerly assistant secretary and assistant treasurer, was elected secretary; H. P. Taylor, formerly assistant secretary and assistant treasurer, was elected treasurer; I. P. Steybe was elected assistant secretary; and A. E. Granholm was elected assistant treasurer.

It was also announced by Mr. Pulliam that at a meeting of the board of directors of Menominee and Marinette Light and Traction Company, subsidiary of Wisconsin Public Service Corporation, A. G. Carson and A. J. Goedjen were elected directors, and Mr. Goedjen was elected vice-president of the company.

Gas Range Article

KEEPING up with Your Gas Range" is the title of an interesting article in the March issue of *Good Housekeeping*. The article describes some of the many improvements in the latest gas ranges and urges housewives to make better use of their new equipment. It is well-illustrated and is accompanied by menus and recipes.

Presents Pin to A. G. A.

GEORGE M. COLE, director of the New York State Electric and Gas Corporation, recently sent to the American Gas Association a pin presented to him in the 1890's by the American Gas Light Association, a predecessor of the A. G. A.

Mr. Cole, a real pioneer in the gas and electric business, retired from active management of the New York State Electric and Gas Corporation on December 27, 1933, after completing 45 years of service as a utility executive. He was one of the first to organize a combined electric and gas company. He is 75 years of age and still maintains an active interest in the affairs of the company of which he is a director.

Launching Dealer Sales Campaign

Dealers' meeting held March 8 at which E. F. Jeffe, vice-president in charge of sales for the Consolidated Edison Co. of New York, announced to 1200 gas and appliance dealers the company's sales promotion plans for April, May and June. The proposed sales activities will include gas refrigeration, gas house heating, gas water heating, gas laundry dryers and portable electric ranges

Affiliated Association Activities

Officers and directors of the New England Gas Association elected at the annual convention in Boston, Feb. 24-25. Left to right, first row: F. M. Goodwin, George S. Hawley, president, R. L. Fletcher, retiring president, J. A. Weiser, F. D. Cadwallader, F. L. Ball. Middle row: Clark Belden, R. M. Keeney, N. B. Bertolette, Cyrus Barnes. Back row: A. E. Erickson, G. G. Howie, R. B. Wright, C. H. Cummings, W. F. Norton, I. T. Haddock, R. N. Hill. Officers or directors missing: R. J. Rutherford, H. R. Sterrett, W. C. Bell, E. M. Farnsworth, C. G. Young, E. E. Bangs, G. W. Stiles

New England Gas Association

ONE of the largest and most successful conventions of the New England Gas Association was held February 24 and 25 at the Hotel Statler, Boston, Mass. More than 300 members were estimated to have attended the closing sessions, which featured addresses by prominent members of the gas industry. R. L. Fletcher, vice-president of the Providence Gas Company and president of the Association, presided throughout the meeting.

A highlight of the convention was an address by N. C. McGowen, president, American Gas Association, entitled "The Gas Industry Today." President McGowen called attention to the improved state of the gas industry in New England during 1937. Total sales of gas during that year, he pointed out, increased 2.3 per cent over the preceding year. Despite a severe decline in general business activity during the last quarter, he stated, "it is estimated that sales of gas for industrial and commercial purposes in New England during 1937 reached a new all-time high of nearly ten billion cubic feet, an increase of more than eight per cent over the previous peak established in 1936."

Other speakers representing the A. G. A. on the program were: Alexander Forward, managing director; R. M. Conner, director, A. G. A. Testing Laboratories; J. V. Postles, chairman, Technical Section; H. R. Sterrett, chairman, Refrigeration Committee; Jessie McQueen, home service counsellor; John W. Clark, Water Heating Committee; Hugh H. Cuthrell, president, Gas Exhibits, Inc.; and Hugh Mitchell, McCann-Erickson, Inc. The new home planning program was described by Howard Myers, editor, *The Architectural Forum*.

George S. Hawley, president, The Bridgeport Gas Light Co., was elected president of the N. E. Association for the coming year. Other officers elected were: first vice-president, R. J. Rutherford, Worcester; second vice-president, J. A. Weiser, Newport; treasurer, F. D. Cadwallader, Boston.

Newly elected directors include: R. L. Fletcher, F. L. Ball, W. C. Bell, N. B. Bertolette, C. H. Cummings, E. M. Farnsworth, F. M. Goodwin, I. T. Haddock, R. N. Hill, W. F. Norton, H. R. Sterrett, G. W. Stiles, R. B. Wright, and C. G. Young. The following men were elected as division chairmen and automatically become directors: G. G. Howie, operating; Cyrus Barnes, sales; R. M. Keeney, industrial; A. E. Erickson, accounting; E. E. Bangs, manufacturers. Clark Belden is executive secretary of the Association.

Michigan Gas Association

THE 1938 convention of the Michigan Gas Association will be held at the Grand Hotel, Mackinac Island, July 5, 6, 7 according to an announcement of the secretary, Albert G. Schroeder. The details of the program will be published in the MONTHLY when available.

Maryland Utilities Association

THE annual meeting of the Maryland Utilities Association will be held at the Lord Baltimore Hotel, Baltimore, Md., on Friday, April 29, beginning at 9:30 A.M., according to an announcement by E. J. Roche, secretary. Individual meetings of the gas, electric and transportation groups will be held in the morning. In the afternoon a general session to be attended by all groups will be conducted. Selected speakers will address the meeting which will be followed by a short business session.

Gas Meters Association

THE annual sales conference of the Gas Meters Association will be held in McFadden-Deauville Hotel at Miami Beach, Fla., April 22. The chairman, Bill Littlefield, is developing a program which will be devoted to the sale and servicing of gas refrigerators. The attendance of service representatives is particularly desired. The officers and directors held a meeting in Orlando on February 11 at which the annual report of the treasurer was approved.

Missouri Association of Public Utilities

THE annual convention of the Missouri Association of Public Utilities will be held this year on April 20-22 in St. Louis, Mo., at Hotel Jefferson. The association membership includes virtually every privately owner electric, gas, and water company in Missouri.

Among the speakers will be: Floyd W. Parsons, editorial director of *Gas Age*; A. A. Nichoson, manager of personnel, The Texas Company; W. C. Beckjord, vice-president, American Gas Association, and general manager of Columbia Gas and Electric Corporation; L. A. Hawkins, executive engineer of research, General Electric Company; Cleveland A. Newton, St. Louis, Mo., attorney for the Mississippi Valley Association; N. T. Veatch, Kansas City, Mo., consulting engineer; L. H. Egan, St. Louis, Mo., president, Union Electric Company of Missouri; J. B. Wilson, president, Laclede Gas Light Company; B. F. Dickmann, Mayor of St. Louis.

A get-together luncheon will be held at noon, April 21, and the annual dinner and entertainment will be in the evening, April 22. Chester C. Smith, president of the Association, will preside at the business sessions and at the luncheon and banquet.

A safety meeting and round-table discussion of accident prevention will open the

convention on April 20. The annual Open Forum for the discussion of timely utility subjects will be held on the afternoon of April 22.

The annual statewide Employees' Speaking Contest will take place on the night of April 20. There will be separate contests for men and for women. Employees of all electric, gas, and water companies in Missouri will be eligible. The subjects will be: For men, "Good Will—How Secured and Retained"; for women, "How Utilities Have Benefited the Home." Cash prizes will be awarded.

The entertainment program, including a dance, sandwich spread, floor show, golf tournament, contests and games for ladies, is being arranged by the Entertainment Committee, of which Paul C. Ford, Kansas City Gas Company, is chairman.

Pennsylvania Gas Association

H. S. Christman

THE program for the annual convention of the Pennsylvania Gas Association to be held at the Skytop Lodge, Skytop, Pa., on May 3, 4 and 5, will be devoted to the distribution, accounting, customer and employee relations, production and new business problems of the industry. While the business sessions will be confined to the morning meetings, these various topics will be thoroughly and comprehensively covered by speakers of note.

The convention will open with the annual banquet on May 3. Following a short business session Howard S. Christman, president of the state association, will deliver an address. A speaker of national reputation will be the chief attraction of the evening. An excellent entertainment program will follow.

Comprehensive Program

The session on May 4 will be taken up with distribution, accounting, and customer and employee relations matters, with C. C. Jones, E. N. Keller, and H. H. Ganser, respectively, presiding. R. J. Ott, The Philadelphia Gas Works Company, will talk about "Noisy Meters," J. W. Buxton, Philadelphia Electric Company, will discuss "Experience with Leak Locator and M-Scope," while a speaker to be selected will talk on "Personnel Training and Retraining." E. N. Keller, Philadelphia Electric Company, will present a "Report of the Pennsylvania Gas Association Accounting Committee," while "Departmental Responsibilities in Connection with Uniform System of Accounts" will be the topic of M. H. Parkinson, Pennsylvania Power & Light Company. A. A. Nichoson, The Texas Company, New York, will talk on "Better Customer Relations—Better Men—Better Business," and the morning session will close with "Customer Relations—Progress Report," by Blackwell Newhall, The Philadelphia Gas Works Company. There will be ample opportunity for discussion of the various papers.

The convention will close on May 5 following the session on production and new business problems, with R. G. Rincliffe and A. M. Wiley, respectively, presiding. Following the paper on "Control of Holder Discoloration," by Dr. J. R. Skeen, United Gas Improvement Company, the remainder of the session will be devoted to new business. Harold P. Mueller, Philadelphia, will have as his topic "A Builder Speaks to the Gas Industry." Two other subjects, with speakers still to be determined, will be "Gas Grows Up with the Country," and "Gas Merchandising Comes of Age." E. C. Sorby, George D. Roper Corp., will discuss "Modern Cookery."

President Christman and E. W. Ehmann, chairman of the Program Committee, believe the program outlined will appeal not only to the member companies, dealers and manufacturers agents, but will attract gas men from other sections.

Talks by two prominent speakers will feature the evening session, while the Entertainment Committee will provide two excellent programs, with golf as the attraction in the afternoons following the business sessions.

Convention Calendar

APRIL

4-6 A. G. A. Distribution Conference
Netherland Plaza, Cincinnati, Ohio

7-8 Pacific Coast Gas Association, Spring Technical Conference
Los Angeles, Calif.

11-13 Mid-West Gas Association
Hotel Lowry, St. Paul, Minn.

12 New Jersey Gas Association
Asbury Park, N. J.

18-19 Arkansas Utilities Association
Hot Springs, Ark.

18-21 American Chemical Society-Division of Gas & Fuel Chemistry
Dallas, Texas

19-21 Southwestern Gas Measurement Short Course
University of Oklahoma, Norman, Okla.

20-22 Missouri Association of Public Utilities
Jefferson Hotel, St. Louis, Mo.

29 Maryland Utilities Association
Lord Baltimore Hotel, Baltimore, Md.

MAY

2-5 U. S. Chamber of Commerce
Washington, D. C.

3-5 Pennsylvania Gas Association
Sky Top Lodge, Sky Top, Pa.

9-12 A. G. A. Natural Gas Department
Roosevelt Hotel, New Orleans, La.

9-13 National Fire Protection Association
Atlantic City, N. J.

13-15 National Petroleum Association
Cleveland, Ohio

14-21 International Petroleum Exposition
Tulsa, Okla.

15-18 American Society of Mechanical Engineers, National Oil and Gas Power Meeting
Dallas, Texas

16-17 Indiana Gas Association
Hotel Gary, Gary, Ind.

23-24 A. G. A. Commercial and Hotel & Restaurant Sales Conference
Belmont Plaza Hotel, New York, N. Y.

23-25 American Petroleum Institute, Mid-Year Meeting
Wichita, Kansas

23-25 A. G. A. Production & Chemical Conference
Hotel Pennsylvania, New York, N. Y.

25-27 Association of Gas Appliance & Equipment Manufacturers
The Greenbrier, White Sulphur Springs, W. Va.

27-28 7th Annual Petroleum and Natural Gas Conference
State College, Pa.

May 31-June 3 The Institution of Gas Engineers, 75th Annual General Meeting
London, England

JUNE

7-9 Edison Electric Institute
Atlantic City, N. J.

7-10 Home Service Conference and Training Course
Hotel Muehlebach, Kansas City, Mo.

9-10 Canadian Gas Association
Royal York Hotel, Toronto, Ont.

15-17 Danish Gas Association
Allings-Sandvig, Denmark

23-24 New England Gas Association, Sales Conference
Viking Hotel, Newport, R. I.

June 27-July 1 American Society for Testing Materials, Annual Meeting
Chalfonte-Haddon Hall, Atlantic City, N. J.

June 28-July 1 American Home Economics Association
William Penn Hotel, Pittsburgh, Pa.

JULY

5-7 Michigan Gas Association
Grand Hotel, Mackinac Island, Mich.

SEPTEMBER

14-16 Pacific Coast Gas Association
Santa Barbara, Calif.

Wk. 18 American Transit Association
Auditorium, Atlantic City, N. J.

OCTOBER

Wk. 10 American Gas Association
Atlantic City, N. J.

10-14 National Safety Council
Stevens Hotel, Chicago, Ill.

National Metal Congress and Exposition★
Detroit, Mich.

★ Includes exhibit sponsored by A. G. A. Industrial Gas Section.

Accounting Section

D. H. Mitchell, Chairman H. W. Hartman, Secretary H. A. Ehrmann, Vice-Chairman

Developments in Addressing Equipment

By R. B. MILNE

Columbia Gas & Electric Corp., New York, N. Y.

WHEN the subject, "Developments in Addressing Equipment," was assigned to me for review, I gladly accepted, thinking the task would not be particularly difficult nor entail any great amount of time. However, I soon discovered that it was necessary to go back some 55 to 60 years. It also became apparent that the subject was not only an interesting one, but was of such scope that it would be impossible, in the space allotted, to present the complete picture to which it is entitled. I have, therefore, attempted to include only the more important points in the development of this type of equipment.

Addressing machines, generally, are divided into two classes—namely, those using paper stencils and those using metal plates.

Paper Stencil Developed

Let us give our first consideration to the paper stencil, which first arrived in the field sometime in the 80's. This was a development by the editor of the "American Wheelman," a Boston publication. It was designed at that time chiefly for the purpose of mailing publications. The original paper stencil was of heavy parchment on which pin-point style letters and numerals were cut by special cutting machines. The parchment stencil was generally retained in its original form until about 1912, at which time the principle of Japanese Yoschimo paper was adopted by the stencil manufacturers. This improvement was made possible only through an arrangement with the Mimeograph Company, who at that time held the patent rights and who had been using this paper for approximately two years.

As the basis of the new paper stencil is produced in the Orient, this product, after importation, is treated to chemical baths and coagulating processes, which of necessity must be exacting in order to produce the proper results. Weather conditions affect this product to some extent and must be taken into consideration when applying the various treating processes. Generally speaking, no change has been made since 1912 in the basic treatment and preparation of this stencil. Certain refinements in the finished product have, of course, been made, and today a different color of paper is used.

Our second consideration is the metal plate, which first made its appearance in the early 90's. It is significant to note that one of the founders of the original metal plate company was identified with the Gas Company at Evansville, Indiana. That gentleman's affiliation with utility accounting led to his consideration of the utility field as one of the principal markets for this new product.

This metal plate conformed very closely with the accounting practices of that period, when the bound ledger was in general use. Each plate formed a link which, when hooked together, provided an endless chain of addresses. This early type of plate was quickly accepted and installed in many utility offices because of its marked error-proof and labor-saving features. The first improvement over the original metal plate was the application of movable sliding rubber type that enabled the user to make major or minor changes in the address, the ledger, or the folio number, in his own office. The movable rubber type plan remained the favorite until a rapid and reasonably priced metal plate embossing machine was marketed—in about 1910. This machine permitted the economical preparation of metal plates at a substantially increased speed and, of course, at a lesser cost, which brought the metal plate again into the foreground.

Flexible Tabbing

Then came the flexible and movable tabbing scheme—in about 1911—which permitted individual or group classification, whichever the companies desired at that time. Inactive meters on consumers' premises, wholesale consumers and other special accounts are now tabbed, making possible the selection of certain classes of accounts without disarranging the general filing order of the list as a whole. The selector principle has also been put to very profitable use in some instances in furnishing information to appliance sales departments, and no doubt many of us here are taking advantage of this type of automatic selection in addressing appliance sales literature to consumers. This tabbing feature applies only to the metal plate, as the paper plate cannot be tabbed. However, paper plates can be selected by means of a notch in the outer frame, which notch, obviously, must be of a permanent nature.

Perhaps the greatest improvement up to that time was the development of the sectional metal plate—in about 1912—, making it possible to reduce the costs of operation and maintenance still further, both from the standpoint of labor and material. The changing of either the customer's name, address, or route and folio number by the use of this sectional plate became a simple matter as compared with the original one-piece metal plate, where the type surface had to be blanked down and then re-embossed. Likewise, it was more simple than the paper stencil, where the complete unit had to be re-cut, re-inked, and the entire new stencil verified for correctness before it could be available for use. As in the case of the paper stencil, the metal plate has not changed to any considerable extent in the past several years. Refinements and improvements, such as a lighter weight of metal, changes in application of the tabbing device, number of individual sections available, etc., have, of course, been marketed but without a major change in the basic principle previously described.

Advantages of Stencil

Since I have enumerated certain advantages of the metal plate, it is only fair to mention some of the advantages of the paper stencil. This stencil has one distinct advantage—that being the possibility of its being either handwritten or typewritten without the requirement of special cutting or embossing machines. Another advantage is its lesser weight, which sometimes permits the housing of large lists where the heavier metal plate could not be stored. This is also an aid to clerical handling.

Our third consideration is the equipment handling both the paper stencil and the metal plate. In 1913 the automatic bill-feeding machines were introduced, to replace the former cumbersome and generally inferior hand-models. With these machines the production per operator was stepped up considerably, with a corresponding reduction in operation costs to the users. In the years that followed, listing attachments were provided for payroll sheets, meter reading sheets, inventory records, meter lists, etc. These changes have been made by degrees dur-

Contributed by the 1937 Customer Accounting Committee, W. E. Scott, Chairman.

ing the lifetime of most of us here, but, having been made so gradually, we may possibly have failed to appreciate their individual significance and importance to the industry.

Even with these substantial improvements there still remained the handicap and the expense that were incurred when bills had to be furnished by the printer—addressed on automatic machines—and later posted on posting machines. The inefficiency of feeding paper through three different machines to get the desired result was readily apparent. The consequent annoyances and the expense of securing accurate registration when this practice was followed remained a problem until nearly ten years ago, when the manufacturers evolved an addressing machine which would take the paper from a roll, print it on one side, address it and deliver it ready for the billing operation. We are all more or less familiar with these machines and no doubt agree that this contribution is generally regarded as one of the most outstanding achievements in the development of addressing equipment.

With the increased demand by regulatory bodies that additional rate information be shown on the customer's bill, the original bill printing and addressing machines were supplemented—in about 1930—by a device which prints not only on the face of the bill but also prints the rate or other desired information on the reverse side of the bill. Some companies use this medium for sales or good-will messages to their customers, listing of collection agencies, and other similar subjects. Recent demands on the part of certain utilities have made necessary the further supplementing of these machines with two-color printing devices, and such applications are now in use.

This brings us down to the present day, after having considered both the paper stencil and the metal plate as well as their related equipment, without touching in detail upon the improvements and refinements in the automatic machines that make their service of such economical value. To what extent the utility accounting field has contributed to this development is probably unknown or at least controversial. It seems, however, that the utility accountant has participated to some extent in the present-day achievements by reason of his continued demand for more economical operation,—by offering constructive criticism at every opportunity and indicating his willingness to cooperate at all times with the manufacturers toward reaching the desired goal, which might be said to be the maximum in refinement of equipment combined with the maximum in economy of operation.

There appears to be no question regarding the efficient and economical accomplishments in the development of addressing equipment up to the present day. This in itself should encourage all of us not only to continue our close association with the different manufacturers but to take them further into our confidence, with a view toward obtaining added improvements and economies in the solution of our future problems—as they may develop.

Writing Arrears Notices

By H. F. HUTCHESON

The Consumers' Gas Company of Toronto

THE following is a brief description of the procedure adopted by the Consumers' Gas Company of Toronto for the preparation of arrears notices. To some this subject may seem prosaic and to contain nothing of interest to them, but there may be others whose situation is similar to ours and to whom this statement of our experience may be of assistance in finding a favorable solution to their own problem.

The writing of arrears notices represents an added expense of collection and because we deplore the addition of this expense to the potential loss which may accrue from a long list of delinquent accounts, we feel an extra glow of satisfaction when we are able to reduce the cost of this work.

This company serves the city of Toronto and the adjacent suburban territory, comprising an area of about 56 square miles and reaching a population in excess of 750,000. Our consumers number about 160,000.

Our plan of accounting calls for the division of the city into 24 geographical districts, and each ledger, of which there are seven, is composed of an equal part of each district. There are therefore 168 control units of approximately 1,000 accounts each, which are the bases of our schedule for meter reading, billing, balancing and collection.

Our system of bookkeeping is the card ledger plan. The ledger cards are 5" x 8" and the monthly charges are recorded on them as part of the billing operation. The payment of these monthly charges is denoted by using an all metal dating stamp. The gas bill is prepared with only one 3" x 5" stub which serves as the cashier's coupon.

The information for writing the arrears notices is taken directly from the ledger cards which, for the convenience of the operators, are arranged in order, in a wooden tray (4" x 8½" x 14") by the ledgerkeeper. The cards with fully paid up accounts are placed on their 8" side and those with accounts in arrears, on their 5" side. The latter group contain the necessary information.

The five-fold forms for writing the notices are supplied in cartons containing 1,500 notices, in one strip, interleaved with one-time carbon. Number one and two copies of the form together comprise the consumer's notice, number two serving as the cashier's coupon, when the consumer uses the notice in paying his bill. Incidentally the size of the form is set at 3" x 5" to correspond with the regular gas bill coupon. Number three copy is used as the collector's work ticket, number four is the cut-off notice and number five the office copy. The office copies are kept on file in the Coupon Listing Department, where all delinquent payments are checked to them to facilitate prompt posting of payments to the collectors' work tickets.

The equipment for writing these notices consists of standard electric carriage typewriters. These machines space, raise and return the carriage electrically. This feature of carriage-return makes possible a decided increase in speed and a greater degree of neatness when compared with our old equipment. The returning carriage is under the constant control of the operator and may be stopped either at the left side of the form or at an intermediate point. As we operate, the intermediate stop is at the tabulation point for the amount and when it is necessary to write more than one amount on the notice it ensures their being vertically in line without the operator having to fumble to find the tabulation stop. In addition to the above features the machines are equipped with 12 to the inch Elite Type, Uncial numerals and Palm-tabulator Key.

The machines are placed on standard folding typewriter desks. On the back of each desk is affixed a box-like container, the bottom part of which holds the carton of forms. A narrow chute allows the form to feed up over an apron hinged to the top of the desk, through a special guide of our own design and into the machines. Returning, the completed forms pass over the incoming ones, into a receptacle in front of the chute. The special guide can be folded back so as to permit the machines to be closed into the desk at night. In designing the form, special attention was paid to the spacing

(Continued on page 159)

Contributed by the 1937 Accounting Machines Committee, G. F. Trexler, Chairman.

Commercial Section

Hugh Cuthrell, Chairman J. W. West, Jr., Secretary F. X. Mettenet, Vice-Chairman

Load Possibilities with Gas-Fired Circulators

Charles F. Spicer

By CHARLES F. SPICER

The Moore Corp., Joliet, Ill.

THE gas-fired circulator today has a very keen competitor in the oil burning circulator. In many territories, and this includes some natural gas territory, the oil circulating heater has had enormous sales, whereas the gas circulator has lagged considerably.

Let us consider the statistics on actual sales of gas-fired circulating heaters and oil circulating heaters for the year of 1937. Samuel Dunckel, managing director of the Institute of Cooking and Heating Appliance Manufacturers, Washington, D. C. reports that more than 350,000 oil circulating heaters were shipped during the year, and the statistical department of the Association of Gas Appliance and Equipment Manufacturers reports 100,000 gas-fired circulating heaters sold during the year 1937. The data on gas heaters represent only about 45% of the industry, while the figures on oil heaters represent more than 95% of the oil heater industry. Coal circulating heaters increased 32% in 1936 over 1935, but in 1937 there was a decrease of 16% in the sale of coal heaters.

Oil Heaters Increase

Ten leading manufacturers of oil circulating heaters in the Middle West had an increase of more than 100% on shipments of oil circulating heaters in 1937 over 1936. Of course, we must recognize that some of this larger sale is due to the fact that many oil circulating heaters are sold off the gas lines.

The most important thing for us to note in this information is that we must realize beyond any doubt that the public generally and the users of stoves in particular have become educated to automatic and controlled heat of some kind. Even though the oil circulator requires partial attention and the gas-fired circulator is more convenient and requires no attention, both oil and gas circulating heaters are being used more and more instead of coal heaters.

The market for gas circulators is firmly established and it is up to us to work the field and glean our share of the profit.

Many people who do not have a central heating plant are just as anxious to eliminate carrying in coal and carrying out ashes and frequently looking after the fire, to say nothing about the dust and dirt, as the people who have a central heating plant.

With the vast difference in the number of sales of oil circulating heaters against gas circulating heaters, considering all the extenuating circumstances it is to our interest to ask why the oil heater has surpassed the gas heater to such a great extent, as the average billing price to dealers on oil burning circulators in 1937 was from $40.00 to $42.00, and a large per cent of these heaters were sold to retail at about $75.00. The average billing price for the first nine months of 1937 on gas-fired circulating heaters was but $17.32 on the first 35,000 heaters sold. I do not have the average billing price on the balance of 65,000. The point I wish to bring out here is that despite the fact that the billing prices on these two commodities are comparative in scale and capacity, the higher priced oil heaters are being sold while with the gas-fired circulators the lower priced heaters are being sold. This is a condition that should and could be adjusted.

Gas Circulator Superior

By any basis of comparison the gas-fired circulator so far surpasses the oil circulator that it is very evident proper selling tactics are not being exercised in getting gas circulating heaters on the retail market, and the value of gas as a fuel for heating has not been properly sold to the public, as in most cases the gas circulator could be used more economically and with much greater efficiency than the oil circulator.

The popular selling oil heater is what is known as the pot type. This requires more draft in the chimney than a coal heater in order to have proper combustion. In the case of a good gas-fired circulating heater the chimney is used for taking off the products of combustion only, and the gas heater does not depend upon a draft for proper performance.

Oil heater manufacturers at a recent meeting recommended that the figure of 70% efficiency be used when operating on a chimney requiring a draft equal to .04 inches to .06 inches of water. However, the manufacturers of what is known as the sleeve type oil heater claim the heater will give good performance when connected to a chimney with a .02 to .03 inch draft and they claim 80% efficiency. Some manufacturers of oil heaters make ridiculous claims, and one manufacturer has an output rating on his heater which is equivalent to 150% efficiency.

The pot type oil heater of all makes requires more expert adjustment and installation than any gas heater made, and all manufacturers of oil heaters issue positive instructions that the heater must set absolutely level as the heaters have a constant level float valve and the input can vary 20% if the heater is not perfectly level.

Then too there is the matter of service, and we can safely say that there are ten service calls made on oil heaters to one on gas heaters, and 75% of the oil heater service calls are due to the inconsistent grades of No. 1 Distillate oil. However this condition will be eliminated within the next year as all of the leading oil refineries are at this time preparing to produce a proper grade of oil for use in the pot type oil heater. Two of the largest refineries at the present time do not make a fuel suitable for a pot type oil heater and they give the consumer the next-best grade they might have, which invariably causes trouble, resulting in service calls.

These popular pot type heaters depend entirely upon the draft for combustion, and due to the difficulty experienced by having these heaters connected to a chimney that does not have an extra good draft, many heaters have been taken out on account of insufficient draft in the chimney and the proper oil not being available.

All of these hazards, inconveniences, restrictions and possible trouble giving devices are eliminated by using a good gas-fired circulating heater.

Cost of Operation

Let us compare the cost of operation of these two types of heaters. The popular selling size oil circulator has a B.t.u. input rating per hour of 56,000 and an output of about 45,000, and in this particular size the fuel consumption in a twenty-four hour day at maximum, is a little over 13 gallons of No. 1 Distillate oil, and the price of 7½¢ per gallon is the lowest price that I have ever heard quoted in any state. I feel safe in making the statement that the average price in most states is just a little over 8¢ per gallon. The minimum fuel consumption of the highest class oil heater is 1¼ gallons in a twenty-four hour period. A good grade of No. 1 Distillate oil contains 136,370 B.t.u. per gallon. Therefore, 1,000 cubic feet of 1,000 B.t.u. gas equals 7.34 gals. of oil (assuming the efficiency of both gas and oil heaters to be 80%) and oil at 7½¢ per gallon equals 55.05¢ per 1,000 B.t.u. gas; 60¢ gas is equal to 8.2¢ oil; 65¢ gas is equal to 8.85¢ oil, and 70¢ gas is equal to 9.54¢ oil, so there are thousands of people who are paying more for

Presented at Eastern Regional Natural Gas Sales Conference, Pittsburgh, Feb. 3, 1938.

oil than gas would cost in a good gas-fired circulating heater.

Where only 500 to 600 B.t.u. gas is available I can see where the oil circulator would have a large sale, but where natural gas is available at the average rate there is no reason why the oil heater should be sold on the gas lines. One city that I know of with 170,000 population has 1,000 B.t.u. gas at 50¢ per thousand, and one retail dealer in this city sold 350 oil heaters in 1937.

It is evident that many people buy on emotion and without getting facts and do not always seek the best appliance or fuel for their requirements.

Oil circulating heaters are not being sold to any great extent where coal is available at an extremely low price, as in this immediate Pittsburgh district, but where coal is sold at a higher price the oil heater is replacing the coal heater so fast that the ticker is running away behind in recording the sales. In fact this condition has so greatly perturbed the coal heater manufacturers that almost all of them have had to manufacture oil heaters in order to keep up their volume.

Inasmuch as the oil heater is practically a new appliance, it is astounding how the sales have increased steadily year after year all over the United States and sections of Canada. Of course, this product has been very highly advertised.

How To Increase Sales

As a means of increasing the sale of gas-fired circulating heaters I would like to express to a certain extent what in my opinion is lacking. First of all, it is obvious in many sections of the country, the public has not been properly sold on the value of gas as a fuel for heating. The gas industry recognizes that there are possibly ten or more salesmen selling electric refrigerators to one selling gas refrigerators, and I feel safe in saying that in cities such as Detroit, Chicago and many others, where natural or mixed gas is used, with a high B.t.u. content, that there are more than fifty sales people selling oil heaters to one selling gas heaters, and that there is ten to twenty times more publicity in the newspapers on oil heaters than there is on gas heaters in many cities. Last Fall the Chicago *Tribune* carried in one issue seventeen advertisements of dealers on oil heaters.

It is evident that something must be done to convince the prospects and purchasers that the gas-fired circulating heater is more economical than oil, and in many cases more economical than coal, to say nothing of the convenience of gas. The gas heater is far superior in its performance to either a coal circulator or an oil circulator. I am convinced that many more than 75% of the people who have purchased oil circulating heaters in towns where natural gas is available would much prefer a good gas-fired circulating heater, if they knew the facts.

Courtesy Nat Blinks, General Gas Light Co., Kalamazoo, Mich.

A few of those who took part in the record Mid-West Regional Gas Sales Conference, held in Chicago, Feb. 10-12. Top row, left to right: F. X. Mettenet, The Peoples Gas Light & Coke Co.; B. T. Franck, chairman of the conference, The Grand Rapids Gas Light Co.; Newell E. Loomis, The Detroit City Gas Co. Second Row: Fred A. Kaiser, Detroit-Michigan Stove Co.; Mildred Clark, Oklahoma Natural Gas Co.; C. A. Luther, The Peoples Gas Light & Coke Co. Third Row: Mattie Rouse, Consumers Power Co.; Karen Fladoes, The Peoples Gas Light & Coke Co. Bottom row: J. C. Sackman, Northern Indiana Public Service Co.; Jessie McQueen, American Gas Association; B. T. Franck

I have attended three meetings of stove manufacturers in the last four weeks, and while my listeners may think that I am stressing the oil heater competition to too great an extent, I am sure that you do not realize the seriousness of this situation, as to the oil circulating heater competition.

The matter of commissions and load bonus should be considered and it is my suggestion that the sales executive give this serious thought for their set-up for 1938. I personally contact utilities in several states, and I am convinced that the gas-fired circulating heater in many towns is not being advertised and pushed as extensively as conditions warrant.

Where the utilities have a splendid sales organization, the remuneration on circulating heaters to the salesmen and heating engineers is such that the sales on these heaters are not pushed, as salesmen and heating engineers can sell other types of heating appliances with the same B.t.u. input and make four or five times the number of dollars in commissions and bonus than can be made on the gas-fired circulat-

(Continued on page 151)

Courtesy Nat Blinks

A scene from the skit "Mrs. Antique and Mrs. Modern," played by Carolyn Bickford and Mattie Rouse of the Consumers Power Company at the Mid-West Gas Sales Conference in Chicago. The setting is the portable kitchen used by the Consumers Power Company in their newspaper cooking schools

Home Service Notes from the Gas Sales Conferences

By JESSIE McQUEEN

Home Service Counsellor, A. G. A.

THE February home service calendar included participation on three regional gas sales conferences and the annual meeting of the New England Gas Association. In New Jersey the home service directors of the New Jersey Gas Association met for a one-day conference on February 14. A good attendance rewarded each of the home service programs. The chairmen were as follows: Southern—Margaret Marable, Dallas Gas Company, now of Servel Inc.; Eastern—Mrs. Ann Sutter, Equitable Gas Co., Pittsburgh; New England—Mrs. Eleanor Kingsley, Worcester Gas Light Co.; Mid-West—Mattie Rouse, Consumers Power Company, Flint, Mich.; New Jersey—Mrs. Eliza Stephenson, Jersey Central Power & Light Co., Asbury Park.

All people participating on the home service programs made a creditable showing in their talks. Following are highlights of some of the papers:

Southern-Southwestern Gas Sales Conference

MODERN EQUIPMENT DRAMATIZED—In the Public Service Co. of San Antonio, one of the features of the Spanish Patio auditorium is the "Talking Range." The home economist opens the program with the mixing of a cake, stressing the fundamentals of precision cookery. As the cake batter is placed in the pans she states, "I have accurately measured my ingredients; I have accurately measured my temperature by means of the heat control on my oven; and I am accurately measuring the time for the baking of the cake by setting the timer on the range." She then places the pans in the oven, closes the door, sets the timer and retires from the platform. The range then takes up the story,—a voice in a magic cabinet through a public address system remotely operated: "*I* am the modern gas range,—one of the modern home servants."

At the end of this talk, which features precision results in cooking, the home economist comes back on the stage and opens the oven, taking out a beautifully baked cake which she holds up for the audience to see. The voice in the magic cabinet finishes as follows: "Please remember I serve *you* and serve you well if you will give me an opportunity. Accurately measure your ingredients; accurately set your heat control and accurately measure your time. The result is precision cookery."

The talking cabinet was displayed at the Southern Gas Association Convention in Dallas, and introduced by R. E. Sively, sales manager, and Nell Read, home service director of the San Antonio Public Service Company.

DEALER COOPERATION—A program launched by the Dallas gas sales department is that of inviting representatives of meat markets, grocery stores and packing houses to attend a meat cookery demonstration conducted by Albertine Berry, home service director. The purpose has been to show how controlled temperatures available on modern gas ranges make possible better cooking of less expensive cuts of meat. Long, slow cooking in moist heat is the answer. About 700 of these representatives will be given demonstrations, and at the close dealers selling gas equipment will be given the same demonstrations as a cooperative procedure.

In the home service program at the Southern-Southwestern Sales Conference, Albertine Berry described this program in her sales-slanted food demonstration entitled "Home Service Goes to Market."

Eastern Natural Gas Sales Conference

COOPERATION WITH OUTSIDE GROUPS—At the conference in Pittsburgh, Mary Evans described the methods of home service cooperation with community groups carried on by the Scranton-Spring Brook Water Service Co., Scranton, Pa. She stated that by cooperating with outside groups the gas company is brought before the community as not only rendering service to its consumers, but also being interested in the welfare of its many civic organizations.

The auditorium of this company is available to all organizations for benefit parties. In the last few months it has been used by such groups as the Dietetic Association, Quota Club, college clubs, parent-teacher groups and the American Legion Auxiliary.

For community demonstrations presented by the company, they rent women's club houses and churches, paying a rental fee for the use of the building. An opportunity is given officers of the group to plan ways of adding to their treasury by charging admission. Miss Evans said, "It is one thing to have what the public wants, and another to let them know you have it. Telling people what you have through cooperation with outside groups has proved successful."

New England Gas Association

PUPPET SHOW—The home service group of the New England Gas Association was treated to an unusual show in seeing Handy McSaver's All Gas Show. Handy McSaver is a puppet made, directed and voiced by Mrs. Lyda Flanders of the Worcester Gas Light Co., at Worcester. G. H. Hawley, president of the New England Gas Association, as he watched the show said "There is nothing amateurish about this show. It is truly professional and beautifully done."

Mrs. Flanders started out making puppets as a hobby; then, like Topsy, it "jest growed." She attended courses hither and yon, studying public speaking, and attending the Puppeteers' Convention in St. Louis. Her show is large enough to be seen by a group of several hundred. In setting up the whole apparatus the employees in the distribution department of the Worcester

Gas Light Co., have cooperated so that the set can be taken down and packed in a small bag. Sections of gas pipe fit into each other and constitute the framework.

The puppet show has been particularly popular in the territory served by the company and has served as a factor of immense good will.

Mid-West Gas Sales Conference

PORTABLE KITCHEN—A high-spot in the Mid-West Conference was the home service skit entitled "Mrs. Antique and Mrs. Modern." The background was the portable kitchen of the Consumers Power Co., of Michigan, which is used for the district cooking schools sponsored by the company. The beautiful streamlined kitchen, fitted with modern equipment, quite stole the show.

The role of Mrs. Antique in this skit was played by Mrs. Carolyn Bickford of Lansing. The part of Mrs. Modern was taken by Mattie Rouse, who carried on this drama activity as just one more addition to her many duties as chairman of the home service program. Mrs. Antique and Mrs. Modern worked simultaneously on the stage, each preparing a cake and an oven dinner. Mrs. Antique worked double time with the old range, and Mrs. Modern was free from all responsibilities such as oven watching, because of her range being equipped with thermostat and clock control.

HOME SERVICE HELPS SALES—Home service work in the Grand Rapids Gas Light Co. features the use of drama in its group presentations. A skit entitled "My Wife Buys a Refrigerator" has been shown twenty-six times to women's club groups who have been invited to make use of the auditorium. This skit is the same one that was shown at the Chicago conference. Lucille Hall, in her paper at the home service luncheon at this conference, commented that as a result of the emphasis placed on the value of silence, one woman calling in the office after attending such a demonstration, said "My refrigerator never turned on so often or made so much noise as it has since I saw that play."

New Jersey Home Service Conference

SURVEY CALLS—In the Elizabethtown Consolidated Gas Co. of New Jersey, eight girls have been added to the staff for the surveying of one- and two-family houses, as a means of finding out what equipment may need service calls, to increase the use of the present equipment, and to judge and report prospects. Before the girls are sent out on this work they are given thorough training courses in the use and operation of gas equipment by Mrs. Mary Hall, home service director. At the end, an extensive written examination is required, covering points on the use of gas and the construction of different parts of different models of gas ranges, refrigerators and water heaters.

C. P. Range Activity

GETTING READY—Classes for salesmen are listed as one means of preparation for the Certified Performance Range Campaign, opening August 1. In The Brooklyn Union Gas Co., salesmen's classes are under way with a course of three lessons given to every company salesman. The salesmen meet late in the afternoon and prepare the foods to be eaten later as a dinner. Recipes on Top Stove Meals are accompanied with talks featuring the advantages of top stove cookery. Oven cookery is given the same treatment, and so is broiling.

In addition to salesmen's classes, as soon as new models are available they will be tested by home service people of The Brooklyn Union Gas Company before they are accepted for sale. When the models have been chosen, a demonstration on all models will be given to the salesmen by the home service staff to show graphically the selling points of each range.

GAS-FIRED CIRCULATORS

(Continued from page 149)

ing heater, even at the same retail price. The result is the salesmen overlook the possibilities of the gas-fired circulating heater, naturally being more interested in their commission, and in some cases, with which I am familiar, the consumer should have been sold a circulating heater, which would have given better satisfaction than the gas appliance which was sold to him.

I am of the opinion that the Service Department making installations can install 5 gas circulating heaters in the same time required to make an installation of one other type of gas heating appliance, and this is surely an advantage to all concerned in the busy heating season.

Oil Competition Keen

There is no question but that the oil circulating heater is very much more competition to the gas industry than coal heaters, and we should give the oil heater manufacturers and dealers some credit for educating the public to an appliance other than a coal heater. While the oil heater requires frequent filling and some attention the dealers cleverly call this automatic heat and it is surely having an acceptance with the public.

With gas circulating heaters actually having the advantage of automatic heat and with natural gas at a price of or about 75¢, there is no real reason for the large sale on oil heaters, and it is going to be up to somebody to educate the public to the decided advantages of gas over other fuels and especially oil. This is a job for utilities and the manufacturers of gas-fired circulating heaters.

It is absolutely necessary for gas-fired circulators to have eye appeal as well as durability and efficiency and from the billing price of gas-fired circulating heaters it is obvious that too many utilities and dealers are attempting to get the most B.t.u.'s for the dollar and many utilities have learned that the cost price is not a great factor comparative to the satisfaction to the user over a period of many years as the income to the utility for many years is of much more importance.

I have noticed that many sales executives furnish their salesmen with data on oil burners for central heating plants comparative with gas, and this same breakdown is carried out including coal, and it is my suggestion that the utility salesmen should be furnished the same information on gas-fired circulating heaters against oil burning circulating heaters. Circular No. 335, published by the United States Department of Agriculture which shows the relative cost of operating a gas-fired circulator against oil burning circulators, can be had from the Superintendent of Documents, Washington, D. C., at 5¢ each.

The dealers who are merchandising oil circulating heaters and coal circulating heaters sell the heaters to heat several rooms or an entire small home, and they have very few reverts providing the heaters are sold in a large enough size to do the job. Many utilities are selling gas-fired circulating heaters as just a one-room heater, and in my opinion this is a mistake, as I know of some successful utility merchandisers who sell this equipment to heat the average small home, and they have been successful in increasing sales on gas circulating heaters each year.

Should Advertise Gas

I will not go into detail as to the great advantages of gas as a fuel for heating, but do suggest that we should emphasize the convenience and other advantages which associate themselves with the use of gas for heating purposes.

While meter readers no doubt have enough meters to read to keep them busy without giving them added responsibilities, many utilities have been very successful in securing prospects by having the meter readers simply make a mark on the meter slips as they read the meter, indicating that the customer does not have a central heating plant, and is heating with some other fuel. This information can be taken off of the sheets and turned over to the Sales Department as a list of prospects to be "weeded out" through contacts by the salesmen.

Cashiers can enter into some little conversation with most of the customers as they come in to pay their bills, and can graciously inquire of the customer if he has a furnace or a boiler in the basement and if not give them a piece of literature on circulating heaters. The cashiers can mark the stub of the bill and this in turn will be taken off and the name and address listed for the Sales Department.

In conclusion I wish to emphasize the fact that it is necessary to continually inform the public as to the value of gas as a fuel for heating and that the enormous sales of oil circulating heaters should convince any of the executives of Utilities that the users of stoves are rapidly being educated to fuels other than coal, and the great masses, whether they have a central heating plant or a stove, are anxious to eliminate carrying in coal and carrying out ashes and looking after the fire, and there is a large proven market for gas-fired circulating heaters.

Industrial Gas Section

Hale A. Clark, Chairman — Eugene D. Milener, Secretary — Frank H. Trembly, Jr., Vice-Chairman

Expanding Markets for Industrial Gas Discussed at Pittsburgh Conference

SO direct and vital was the information packed into the papers presented at the A. G. A. Conference on Industrial Gas Sales held in Pittsburgh, Pa., March 7 and 8 that those present were galvanized into active discussions that brought out a world of facts, figures and experiences of great value. The conference was held under the auspices of the Industrial Gas Section, Hal A. Clark, Detroit City Gas Co., Detroit, Mich., Chairman. More than 150 natural and manufactured gas men from all over the country registered.

Among the highlights of the conference was the prolonged discussion prompted by a paper entitled "Penetrating the Industrial Air Conditioning Market" by F. M. Johnson, Kathabar Div., Surface Combustion Corp., Toledo, Ohio. Practically all of the papers were illustrated with slides.

The conference opened Monday morning with Mr. Clark presiding. The keynote address was made by Charles E. Bennett, president, The Manufacturers Light & Heat Co., Pittsburgh, whose subject was "The Desirability and Value of Industrial Gas Business." Mr. Bennett

Chairman Clark and Vice-Chairman Trembly presiding at the conference

By J. B. NEALEY

American Gas Association

stressed the fact that the most important job today was sales, and that a logical and economic development and the retention of industrial gas markets is absolutely necessary in the gas business.

Illustrating how the industrial load filled the valleys of the load curve he gave delivery figures for his company on the coldest day in almost 30 years, Jan. 27, 1936, for different classes of business. Summing up, he said, "our industrial customers on the peak day required only 19.8% of our production and transportation capacity, yet they purchased 42.3% of our total output during the year. All other classes of customers (chiefly domestic) required 80.2% of our capacity on the peak day and used only 52.7% of our year's output." He then went on, in a most interesting manner, to develop the subject of an economic balance between domestic and industrial gas sales.

Alexander Forward, managing director, American Gas Association, paid tribute to the industrial gas men in a brief address and voiced his appreciation of the work they were doing.

Crucible Furnace Described

The development of an improved type of crucible gas furnace for melting brass was described in a joint paper "Improvements in Crucible Melting With Gas" by Ralph D. Hawkins, The Bridgeport Gas Light Co., chairman, Non-Ferrous Metals Committee and Oliver D. Pritchard, The Brooklyn Union Gas Co. It was shown that by changing the design of the old melting furnaces and utilizing high temperature insulating refractories a reduction in fuel consumption of up to 40% may be effected. During the following discussion Ralph L. Manier, Central New York Power Corp., Syracuse, chairman, Advisory Committee, told of melting steel, and J. William Harrison, Hartford Gas Co., Hartford, Conn., cited low costs obtained with brass melting.

Prominent gas men at the Pittsburgh conference. Left—Ed. Kramer, Atlanta, Ga., chairman, Gas Engine Power Committee. Below, left to right: Thomas E. Wood, Pittsburgh; Franklin T. Rainey, Columbus, chairman, Program Committee; C. B. Mershon, Pittsburgh; Ralph D. Hawkins, Bridgeport, chairman, Non-Ferrous Metals Committee; George W. Ousler, Pittsburgh; Harvery C. Weller, Toledo

"Immersion Heating Capitalizes the Advantages of Gas for Soft Metal Melting" was the heading of a paper by Elmer B. Dunkak, The C. M. Kemp Mfg. Co., Baltimore. He gave much valuable data on large volume, soft metal melting in tin pots in tin plate mills, big lead pots used in sheathing rubber hose, stereotype pots in newspaper plants, lead pots in heat treating and many other applications. Savings accomplished with this method of metal melting were enumerated.

During the discussion of Mr. Dunkak's paper, he cited a battery of 8 monotype machines in one plant in Baltimore in which the melting pots were changed to this method of melting with a saving in fuel of 58%. George J. O'Neil, Pennsylvania Gas & Electric Co., York, Pa., matched this with a statement about the conversion of 8 linotype melters in the plant of a local newspaper 2½ years ago, resulting in a fuel saving of 54%. Karl Emmerling, The East Ohio Gas Co., Cleveland, contributed his successful experiences with tin plate pots in steel mills.

Gas Forging Practice

A most informative case history was presented in a discussion of up-to-date gas forging practice by M. W. Martin, Public Service Co. of Indiana, Indianapolis. Details of a series of tests on oil-fired forging furnaces resulting in the adoption of a combination gas-oil burner utilizing 80% gas were given. At one point in these tests it was indicated that "neither the straight inspirator non-luminous flame or the highly luminous diffusion flame appeared to meet our previously established forge shop requirements," said Mr. Martin. The combination gas-oil burner was designed to introduce illuminating hydrocarbons in the form of fuel oil and the results were highly satisfactory. This paper was followed by an interesting exposition by N. B. Lantz, Public Service Co. of Indiana, Newcastle, Ind.

The Industrial Gas Men's Luncheon was to be addressed by Joseph McKinley, vice-president in charge of sales, Equitable Gas Co., Pittsburgh, but due to sickness his address was delivered by G. W. Ousler, general sales manager, of the same company. Stressing the necessity for steady intelligent effort, he said, "In my opinion, the day is here when no gas company, whether mixed, manufactured or natural gas, can leave any load, however secure it may seem, unprotected and without sales and utilization attention. Even when a customer is completely sold and is using gas fuel exclusively we cannot rest on our oars."

Forced Convection Heating

The Monday afternoon session opened with Frank H. Trembly, Jr., The Philadelphia Gas Works Co., and vice-chairman, Industrial Gas Section, presiding. The first speaker was Harvey C. Weller, Surface Combustion Corp., who spoke on "A Discussion of Gas in the Glass Industry." He told of how forced convection heating, which has been so successful in modern industrial furnace applications in other fields within the temperature ranges of 600 to 1200 deg. F., has been applied to glass lehrs with very good results. Most important result was the elimination of the muffle.

Mr. Weller then discussed the direct firing of ceramic colors on glass. "An oxidizing atmosphere is necessary and when manufactured gas with considerable sulphur is used, gas radiant tubes are employed," he stated. The accompanying slides showed a number of interesting installations. Many other points were brought out by Mr. Weller in answer to questions.

The relative merits of "Long and Short Gas Flames in Industrial Heating" were related in a paper by A. M. Capper, Continental Roll & Steel Foundry Co. Another definition is "luminous flame" and "clear flame" and Mr. Capper, in describing the luminous flame, stated that generally "for a given flame of gas through the same burner, this luminosity is increased with an increased length." Points in favor of the long luminous flame were: An increased rate of transfer; more uniform temperature; less maintenance of refractories and less oxidation or scaling. In favor of the short flame were better control of furnace atmospheres; less combustion volume required; lower initial cost and elimination of smoke. Valuable information on all these points was given leading to the conclusion that the long flame was the best for many applications.

During the following discussion Karl Emmerling, The East Ohio Gas Co., declared that the luminous flame has proved invaluable in continuous heating furnaces in steel plants when the flow of gases was counter to the flow of work. He cited 20 or 30 gas furnaces of that type in his territory, all but three fired with gas luminous flames. In answer to questions Mr. Capper thought 1200 deg. F. the lowest practical temperature at which luminous flames should be used. C. B. Mershon, The Manufacturers Light & Heat Co., Pittsburgh, recalled 6 continuous gas billet heaters in one plant in which gas was most effective when the luminous type flame was employed. Mr. Capper further stated that the same burner equipment will produce satisfactory results with manufactured gas.

Propane and Butane Study

Paul J. Ziegelbaur, Detroit City Gas Co., spoke briefly on "A Study of Propane and Butane as Industrial Fuel" saying that he had sent out a questionnaire on this subject and that the replies were so conflicting in ideas as to render the effort almost worthless. Discussion developed the fact that liquid fuel prices vary so widely, that the market conditions and competitive setup were different for every locality and that each local market was a subject for analysis by itself.

Below, left to right: L. B. Crossman, Boston; Lawrence E. Wagner, Providence; Ralph D. Hawkins, Bridgeport; J. William Harrison, Hartford; Charles E. Bennett, Pittsburgh, keynote speaker; Frank Leahy, Youngstown; Chairman Clark, and Karl Emmerling, Cleveland. At right are Philip Dressler, Pittsburgh; and T. W. Halloran, Albany, chairman, Food Industries Committee

Karl Emmerling, The East Ohio Gas Co., Cleveland, presided Tuesday morning and the first paper was "New Developments in Applying Gas to Decorating Kilns" by Philip Dressler, Swindell-Dressler Corp., Pittsburgh. Mr. Dressler described the interesting gas decorating kiln recently installed at the Lenox potteries at Trenton, N. J., which are heated with gas radiant tubes. Ralph L. Manier, Central New York Power Corp., Syracuse, told about bisque and glost kilns in Syracuse that had been successfully converted from electricity to gas radiant tube heating. C. B. Mershon stated that a circular type kiln, 30 ft. in diameter, at the Shenango Pottery was heated by this method. This kiln has a capacity for 1000 dozen pieces of china per day. Mr. Dressler thought that the gas radiant tube method of heating would eventually become standard for porcelain enamel furnaces.

Gas Use in Food Industries

T. W. Halloran, New York Power & Light Corp., chairman, Food Industries Committee, delivered a valuable paper entitled "A Discussion of Gas in Food Manufacturing Industries." Figures were cited to show the enormous size of the food production industry and classifications were given to indicate where gas might be sold to advantage. Special processes such as coffee and peanut roasting, candy making, banana ripening, etc., were then discussed and improved equipment described. L. B. Crossman, Boston Consolidated Gas Co., stressed the need for more information on gas application in smoke houses. William D. Thompson, The Laclede Gas Light Co., St. Louis, vouchsafed information on the process of tenderizing hams where gas was being successfully used.

How a big industrial gas load was built during the depression was told by T. E. Butler, The Peoples Natural Gas Co., Pittsburgh, in a paper, "Selling Natural Gas During a Recession." Mr. Butler stated the depression made the building of the load possible because prior to that the mills and factories were too busy to take time to convert furnaces and fuel costs were a secondary consideration. During the depression, however, he was allowed to demonstrate what gas fuel would do toward increasing production, turning out a better product and reducing fuel costs. This led one plant after another to abandon coal, oil and producer gas in favor of natural gas. Among these were steel mills, foundries, glass plants, railroad repair shops, die blocks and shear knife plants; also dairies, ice plants, etc. In a tool steel plant gas consumption was increased from 7 million cu.ft. in 1930 to 138 million in 1937 and as much again is expected.

Franklin T. Rainey, The Ohio Fuel Gas Co., chairman, Program Committee, presiding at the Tuesday afternoon session, first introduced W. N. Blinks, General Gas Light Co., Kalamazoo, Mich. One method of selling cited by Mr. Blinks in his paper "Proven Methods for Selling Gas Unit Heaters to Factories" is to introduce the idea at the time the plans for a new building are being drawn. Savings due to basement elimination, first cost of equipment, less fuel used, and lower operating expenses usually sell not only space heating but process heating as well. Plants with worn out heating systems, buildings previously unheated or with inadequate heating equipment, factories with some departments shut down during slack periods or small industries occupying portions of large vacant plants—all offer excellent opportunities to sell gas unit heaters.

Mr. Blinks also declared "I would venture to say that there is not a man present who could not in his contacts with industrial accounts find at least one application for unit heaters in each plant visited —and by application we mean sound economical, efficient application."

Industrial and Commercial Gas Advertising Schedule for April

Magazine	*Date*
American Restaurant	April
Bakers Helper	April 2
Bakers Weekly	April 16
Ceramic Industry	April
Food Industries	April
Hotel Management	April
Industrial Heating	April
Iron Age	April 14
Metals and Alloys	April
Metal Progress	April
Modern Beauty Shop	April
Steel	April 11

Air Conditioning

J. I. Trimble, Surface Combustion Corp., contributed valuable information and cited several case histories as did Homer Hood, Battle Creek Gas Co. George Simpson, Pittsburgh Lectrodryer Corp., Pittsburgh, declared that a large part of industrial air drying involved "water correction in air" and that one should think of the moisture in the air as superheated steam and what it could do to the customers' products.

The Kathabar or lithium chloride system of air conditioning with gas was described in a paper entitled "Penetration of the Industrial Air Conditioning Field" by F. M. Johnson, Surface Combustion Corp. He also told how the same equipment that was used for dehumidification in summer could be used for humidifying and heating in the winter. He cited installations in a drafting room, a cellophane printing plant, a match drying tunnel, a room for treating photographic paper, etc.

E. P. Kramer, chairman, Gas Engine Power Committee, in discussing the subject from the gas engine viewpoint, stated that one had but to "realize that the compression end of the air conditioning business is very little different from the compression end of the ice business," to glimpse the possibilities here. He added that the margin of profit in cold storage and ice plants was often so small that the question of the prime mover to use becomes a very important consideration.

The outstanding success of this conference resulted in a rising vote of thanks being tendered at the close to the Committee on Conference Program and Arrangements, composed of the following:

Franklin T. Rainey, chairman, The Ohio Fuel Gas Co., Columbus, Ohio; John H. Warden, vice-chairman, Oklahoma Natural Gas Co., Tulsa, Okla; J. P. Brosius, Equitable Gas Co., Pittsburgh, Pa.; C. W. Gale, Knoxville Gas Co., Knoxville, Tenn.; W. F. Miller, Public Service Co. of Northern Illinois, Maywood, Ill.; J. F. Quinn, The Brooklyn Union Gas Co., Brooklyn, N. Y.; Irving D. Ross, The Peoples Natural Gas Co., Pittsburgh, Pa.; O. C. Warren, Birmingham Gas Co., Birmingham, Ala.; and T. E. Wood, The Manufacturers Light & Heat Co., Pittsburgh, Pa.

Anyone who looks forward to an age when gas will replace solid fuel or oil in industrial processes cannot help being encouraged by the latest developments in the potteries, where the older type of kiln furnace, burning solid fuel, is being replaced by gas furnaces at the rate of one a week. —R. J. ROGERS.

A Letter from Poland

FROM Warsaw, Poland, an interesting letter was sent to Lawrence E. Biemiller, of Baltimore, chairman of the Volume Water Heating Committee, Industrial Gas Section. It was written by E. T. Miks, contractor to the Polish War office and municipal gas works, and promised information on large volume water heating in that country. Following is the text of the letter, dated February 9, 1938:

"I am in receipt of your circular letter pertaining to data in respect to Hot Water Usage for Industrial Purposes.

"I beg leave to advise you that we have for the past three years had quite interesting experience with the heating of large hot water tanks in Metallurgical Works in Poland. In all cases the tanks were heated by means of Immersion Burners supplied with pre-mixed gas and air, and thermal efficiencies up to 75% have been obtained in some cases.

"As I presume that data on such equipment will be of interest to your committee, I shall prepare a complete data sheet and ensure that same reaches you before May 1."

This letter shows how far this committee is reaching out to secure up-to-date data on heating water for industrial and commercial establishments.

Industrial Gas Briefs

One of the new type of large-volume automatic gas immersion water heaters, incorporating principles long used in steam coil heaters, was recently installed in a large industrial plant in Rockford, Ill. This installation was made under the supervision of the industrial gas department of The Central Illinois Electric & Gas Co. of that city.

Dog biscuits, Ken-L-Rations brand, are now produced and baked on a mass scale. The company making these biscuits is located in Rockford, Ill., and has just purchased a large tunnel-type gas-fired bake oven which is 85 ft. in length. This installation was also made under the supervision of The Central Illinois Electric & Gas Co.

Larry Foote, industrial gas engineer for The Central Illinois Electric & Gas Co., reports that the gas radiant tube enameling furnace installed in the Geo. D. Roper plant last fall is operating beautifully. He states that it is producing enamel ware at a cost lower than has ever been attained in this plant heretofore.

To further improve the already excellent quality of the glass tank refractory blocks made by the Findlay Clay Products Co., Pittsburgh, Pa., this concern recently installed new gas-fired kilns. These replaced the old coal-fired kilns. This brand of glass tank refractory block has a remarkably long life. The gas kiln installation was made with the cooperation of the Industrial Gas Department of The Manufacturers Light & Heat Co., Pittsburgh.

Abandoning the conventional steam kettles, Gray & Company, Portland, Oregon, have adopted gas hot plates in a successful effort to further improve an already high standard of glaced and other processed fruits. One order for gas hot plates has been followed by another as the easily controlled gas burners have established their superiority for several of the processes in this plant.

A higher quality salted nut product is being produced with a deep fat fryer heated with gas immersion (gas heated tubes right in the kettle). The General Grocery Company (wholesale), Portland, Oregon, has just installed a heavy duty nut cooker of this type with a thermostatic temperature control. The gas immersion type of heating, together with the temperature control, is said to preserve the oil longer and in better condition and produces a better product of greater uniformity. These installations were made with the cooperation of the Portland Gas & Coke Co., Portland, Oregon.

BEHIND THE SCENES . . .
with INDUSTRIAL GAS COMMITTEES

Managing Committee of the Industrial Gas Section earnestly listening to J. P. Leinroth reporting on progress in industrial and commercial trade paper advertising at a meeting of the committee in Pittsburgh, March 9

What's this? Ed. Kramer's Gas Engine Power Committee takes time out for tea. Has your committee gone sissy, Ed.?

Roy Wright of Cambridge, Mass., is handing it out to the Commercial Cooking and Baking Committee at the Pittsburgh meeting

Charlie Bellamy's Industrial and Commercial Air Conditioning Committee preparing for a strenuous session

Technical Section

J. V. Postles, Chairman H. W. Hartman, Secretary F. M. Goodwin, Vice-Chairman

The Refractory Screen Carburetor Process Heavy Oil Operation

By NORDEN R. JONES

Supt., Gas Department, Cia. Cubana de Electricidad

THE Refractory Screen Carburetor Process developed by the Combustion Utilities Corporation for the utilization of high carbon oils in the production of carburetted water gas has been used by Compania Cubana de Electricidad at its Havana, Cuba, gas plant for the past three years. This article will outline our experience and some of the unusual operation features of the process which has proved of considerable value to us in the satisfactory conversion of extremely viscous high carbon oils and coke to a 510 B.t.u. carburetted water gas.

Our original decision to install this process was based on the economies made possible by permitting the use of Bunker "C" oil instead of gas oil and the use of much less coke per MCF produced. At that time the cost of coke delivered at the plant was much higher than for equivalent bunker oil and a substantial margin existed between gas oil and fuel oil. Since then, due to an increase in the cost of fuel oil the savings realized from the former, while not as great as originally estimated, are still sufficient to warrant the conversion of an additional set at our plant to this process. The greater ease of oil handling over that of coke and the practical elimination of severe clinker difficulties is also of considerable value.

Economic Factors

Another factor of economic value is that this process has made it possible to use the same grade of Bunker "C" oil that is purchased in bulk for steam generation purposes at the electric plant with the consequent advantage of combined oil storage and price advantages that accrue to the purchase of oil in large quantities. As anticipated, a substantial reduction in solid fuel used for generation has also been made which is further reflected in increased operating economies because of the favorable relationship of Bunker "C" oil over that of coke.

As the principal elements of the generating equipment used in this process are the same as those employed in a typical backrun carburetted water gas set, the changes required to convert our existing 11′ 0″ Western Gas backrun set equipped with mechanical operator, heavy oil lines and oil heaters consisted of: the installation of a thin refractory screen in the carburetor, a reverse blast air line with hydraulic controlled valve was connected from the air header to the top of the superheater and two water cooled oil sprays with associated oil lines, meters and control valves were provided in the generator. The accompanying diagram will serve to make clear the extent of the new work as above outlined.

The following will briefly describe the main operating features of the process and give a general resumé of the results obtained from the operation of the 11′ 0″ converted set.

In general the operation, with the above changes, differs but little from that of our past operations except in those functions of production required by the viscous high carbon oils used. Chief among these as incorporated in plant operation and cycle are:

The operating cycle (see diagram) consists essentially of that of a standard backrun cycle except that immediately following backrun steam a reverse blast or back air purge through the carburetor takes the place of the usual upsteam purge through the generator fire. This is followed by generator blast, blow run, uprun and backrun which completes the cycle. Following is typical of the cycle presently being used:

Blast	32%
Blow Run	5%
Uprun	32%
Backrun	18%
Reversed Air Purge	12%
Valve Change	1%
Length of Cycle	5 minutes
Average Capacity per set hour	190,000 cu.ft.

The reversed air is used to burn the excess oil carbon and coke, deposited from a previous run, from the refractory screen and transfer heat back to the screen, the top of the carburetor and the generator. It also purges rich gas to the holder and introduces an inert gas in the superheater, carburetor and generator which prevents explosions when the secondary and primary air valves are opened. Unusual to ordinary practice the carburetor blast is opened before the generator air and burns the oil vapors that otherwise would pass out of the stack as smoke. Ignition of the primary blast gases with the secondary air is established by the hot carburetor walls and the screen which have been brought back to ignition temperature after the uprun by the backrun steam and reversed air purge.

Retains Coke Dust

We have found that the refractory screen retains practically all of the carbon and coke dust from gases passing through the carburetor from the generator, also that the screen aids in transfering heat to the backrun steam and reversed air.

On the uprun, oil is simultaneously sprayed on top of the hot generator fire and into the top of the carburetor. During the backrun which follows, the generator oil is continued to give the desired amount of reform. A constant quantity of oil per cycle is used in the generator during uprun and backrun and the oil sprayed into the carburetor is varied as required to maintain the proper B.t.u. value of the gas. This provides a simple control and aids in maintaining correct equilibrium of heats in the generator fire. About 15% of the oil is used in the carburetor, 20% for reforming in the generator during down

Attention Production and Chemical Men!

Make your plans now to attend the annual joint conference of the Gas Production and Chemical Committees of the American Gas Association, which takes place May 23, 24 and 25 at the Hotel Pennsylvania in New York City. A program alive with interesting subjects will be augmented by three luncheon conferences at which free and open discussion will be encouraged. Here is a chance to get up-to-date with your production and chemical problems. See the May issue of the A. G. A. Monthly for complete program details.

Professor J. J. Morgan of Columbia University, chairman of the Chemical Committee, and C. R. Locke of the Chicago By-Product Coke Company, chairman of the Gas Production Committee, are in charge of the conference.

steam and 65% in the generator for enriching during up steam. This produces a maximum amount of oil carbon from distillation and reform for blue gas production in the generator as practically all of the oil carbon is retained and becomes a part of the coke bed. As previously mentioned the carbon deposit in the carburetor is burned off by the reversed air purge.

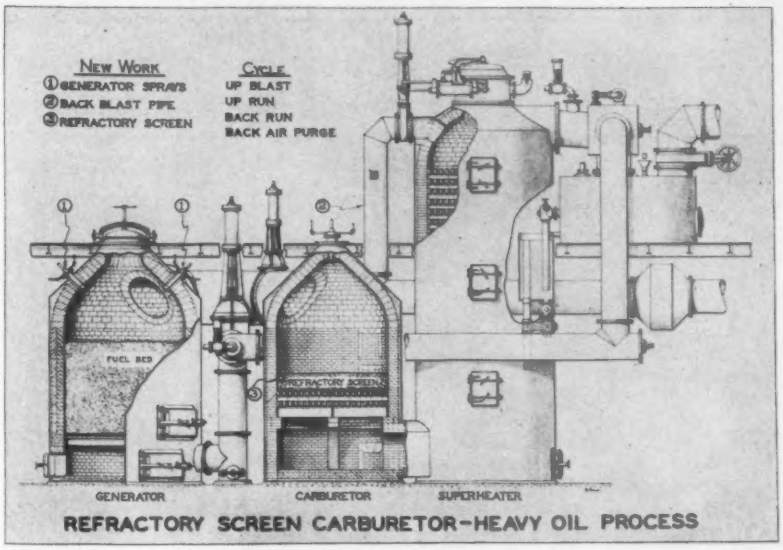
We have noted that in the sets not equipped with the refractory screens, it is impossible to sufficiently enrich the gas by using the present heavy oil in the carburetor only. A mixture of gas oil and Bunker "C" oil is required in the carburetors when operating these sets. The gas from the generator has a high B.t.u. value (over 400) so that the carburetor has little enriching to do as compared with processes where small quantities of oil or no oil is used in the generator.

Operating Experience

With very heavy high carbon oil there is some carbon and ash deposit on the refractory screen that is not completely consumed on cycle. This requires the cleaning of the screen about once a week. The time for removal and replacing the screen brick is only about one hour and the refractory brick is reused at subsequent cleaning. The checker support brick lasts generally with our grade of oil about the same length of time as our generator lining and is replaced whenever general repairs are made. The generator cleaning time has been decreased considerably due to the small amount of ash and clinker to be removed and no oil carbon scurfing and cleaning is required in the base of the carburetor and superheater even with the heaviest of oils. Another condition we have noted is that the superheater checkers remain clean and do not need replacement as often as is required when the oil carbon is allowed to adhere to the surface of the checkers. In fact, the superheater brick have been in use for three years and even now do not need replacing.

In the control of the generator fire, coke is charged every six runs as in ordinary practice. A thin fuel bed of approximately 6' 0" in depth is used instead of the accustomed deeper beds. During the charging period a steam ejector draws a down draft through the generator with exit to the stack through the backrun line and partially opened backrun valve. This prevents any flames from flashing out the generator charging door and facilitates the removal, by scraping, of any soft carbon formed during the run period from the oil spray heads and walls of the generator. On the last run, before coaling, the amount of oil to the generator is greatly reduced in order to further reduce flashing tendencies when the charging lid is opened.

The tar formed, while heavy, when 20% of the oil is reformed in the generator, is readily drained from the washbox. Besides the regular seal pot overflow there is a direct 10" drain line that is used periodically to drain off the tar from the bottom of the washbox. In operation there is absolutely no trace of direct emulsion. The tar is drained off from the tar separator into tanks, heated, and used directly for boiler firing without further dehydration. This tar has a moisture content of from 20-30% and is burned efficiently by means of "Best" tar burners. Due to the high carbon content the tar is not sold for general commercial uses. With the heavy oil now being used the tar yield is sufficient to furnish practically all the boiler fuel required, a balance exists so there is no excess tar.



REFRACTORY SCREEN CARBURETOR—HEAVY OIL PROCESS

Fuel requirements in our operations have varied to some extent depending on the quality of oil and coke used. With a 13° Bé oil and a good coke the average operating figures obtained with this process are 14.2 lbs. coke and 4.3 gallons of oil per MCF of 500 B.t.u. gas. With 10° Bé oil and good coke, these figures reach 17.0 lbs. coke and 4.7 gallons of oil per MCF of 510 B.t.u. gas and a proportionate increase in the tar yield.

The oil that is now being used is Venezuelan Bunker "C" of the following analysis:

B.t.u. as received	18,205
Specific Gravity at 60° F.	1.0000
Degrees Baumé at 60° F.	10.0
Moisture—% by volume	0.3
Sediment—% by weight	0.163
Carbon Residue %	10.96
Ash, %	0.06
Sulphur, Lbs.	2.47
Viscosity—Furol at 122° F.	224"
Viscosity at 150° F.	87"
Viscosity—Universal at 175° F.	438"
Viscosity—Universal at 200° F.	281"
Viscosity—Universal at 220° F.	175"

As noted, the sulphur content of the oil is high, but as we have ample purification capacity this has not bothered us. The H_2S content of the gas is 300 grains per 100 cu.ft. The specific gravity of the gas is 0.70.

As our atmospheric temperature averages 80° F. and seldom goes below 65° F., it is much easier for us to handle the heavy oil and tar than it would be in the northern parts of the United States unless adequate provision is made to overcome difficulties experienced from viscous materials of this nature.

Installation cost of the process in existing carburetted water gas plants is governed by plant conditions such as oil storage, oil heating and handling facilities, tar storage and separation facilities, etc. The cost of converting the Havana set was moderate due to the small changes required to the set proper and heavy oil pumps and heaters being available. Practically no changes were required to the separation and tar handling equipment, because as previously outlined no tar emulsion is formed and effective separation is obtained in existing sumps and separator.

In the operation of the set to date we have not experienced any serious operating difficulties. Plant performance as a whole may be considered about the same as that of carburetted water gas with the exception of the handling of viscous oils and tars. When the quality of the oil is radically changed as from 13° API to 10° API, it is necessary to slightly change the heats and the cycle.

The Refractory Screen Carburetor Process has proved so satisfactory that another set is now being equipped with it.

Gas Line Record Set

AN all time record for 24 hours' delivery of gas through the Memphis Natural Gas Co. pipe lines was established on January 31, Birger L. Johnson, president, announced recently. On that day, 80,000,000 cubic feet were delivered over the entire system, and 65,000,000 were delivered to the City of Memphis alone.

Testing Laboratories

R. M. Conner, Director — Managing Committee: J. S. DeHart, Jr., Chairman — N. T. Sellman, Secretary

Standards To Be Developed for Portable Bake Ovens and Counter Appliances

By FRANKLIN R. WRIGHT

A. G. A. Testing Laboratories

IN line with the usual policy of developing approval requirements for the testing and certification of gas appliances as the needs and demands of the industry warrant, steps were taken recently leading to the preparation of requirements for portable bake ovens, deep fat fryers, unit broilers and various types of commercial kitchen counter appliances, such as hot plates, griddles, coffee urns, toasters, sterilizers, etc.

Two new subcommittees of A.S.A. Sectional Committee, Project Z21, A. G. A. Approval Requirements Committee, have been organized to develop approval requirements for bake ovens and counter appliances. The subcommittee on portable bake ovens consists of four gas company and four manufacturer representatives, while the counter appliance subcommittee, because of the diversity of equipment to be covered, has a total membership of twelve equally divided between gas company and appliance manufacturer representatives. As in the cases of other requirements subcommittees, manufacturer members on these two groups were nominated by the Association of Gas Appliance and Equipment Manufacturers.

Spring Meetings

It is expected that initial meetings of these committees will be held some time this spring to start preparation of standards and to determine what, if any, research or investigations are needed to permit completion of them. It is hoped that it will be possible to complete requirements for bake ovens and for at least the principal counter appliances by the early part of next year.

The task of developing approval standards for deep fat fryers and unit broilers was assigned, by the Approval Requirements Committee, to the Subcommittee on Approval Requirements for Hotel and Restaurant Ranges. The title of this committee was consequently changed to "Subcommittee on Approval Requirements for Hotel and Restaurant Ranges, Deep Fat Fryers and Unit Broilers," and the membership increased by adding one additional manufacturer and one more gas company representative. The next meeting of this group will probably be held this spring at which time plans will be laid for the preparation of approval standards for deep fat fryers and unit broilers. It is probable that the requirements for such equipment can likewise be completed by the early part of 1939.

As soon as copies of tentative requirements for the various appliances referred to are completed by the subcommittees concerned, they will be published and distributed for criticism. Unless unforeseen contingencies arise, these requirements should be available late this year.

Any comments or suggestions regarding the proposed requirements referred to above from either gas company or appliance manufacturer interests will be welcomed by the subcommittees concerned and careful thought and discussion given to them.

Requirements for Gas Water Heaters

REVISIONS to the approval Requirements for Gas Water Heaters effective January 1, 1938, and to the Listing Requirements for Attachable Gas Water Heating Units Without Water-Carrying Parts were completed by the subcommittee at its meeting in Cleveland on January 31. The revisions adopted at this session and at the meeting in November of last year, were recently published and distributed to member companies for criticism.

Another meeting of the subcommittee will be held late in March or April to review comments and criticisms submitted by members of the gas industry. Any comments concerning these and other requirements recently published for criticism, should be mailed to R. B. Harper, chairman of the A. S. A. Sectional Committee, Project Z21, A. G. A. Approval Requirements Committee, in care of the American Gas Association Testing Laboratories, 1032 East 62nd Street, Cleveland, Ohio.

Among the more important changes in the above mentioned requirements are the ones applying to the allowable operating time of automatic devices to prevent escape of unburned gas. The time allowed for these devices to close off the gas supply has been reduced from 10 to 5 minutes. A similar change has been made in the time permitted to turn on the main gas supply. In addition those devices which require manual operation to assume the "on" position and those which operate every time the main burners are turned "on" or "off," must open the gas supply in not more than 2 minutes.

Among the other changes made in these standards are those necessary to correlate the listing requirements for attachable water heating units with the approval requirements for water heaters.

Subcommittee on Approval Requirements for Gas Clothes Dryers at a meeting, Jan. 21, 1938. Left to right: W. J. Doyle, A. H. Gerhardt (for E. N. Hurley, Jr.), R. A. Koehler, C. H. Light, chairman, C. H. Wiley, F. R. Wright, and Julius Judelson, Jr.

NATURAL GAS CONVENTION

(Continued from page 137)

as well. Entertainment features of the four-day convention, not including the many attractions afforded by the uniqueness of New Orleans, will be a moonlight ride and dance on the Steamer *President* on the mighty Mississippi River, and a gala reception and ball at the Roosevelt Hotel.

No matter what may be your particular interest in the gas industry and your idea of a convention, this year's 1938 meeting should fulfill your requirements and be most enjoyable.

GAS INDUSTRY SALES PROGRAM

(Continued from page 125)

now of putting this equipment in the hands of our customers. More modern selling methods are being developed every day. One company I know is offering certain credit for each dollar of monthly gas bill to help pay for appliances over the total credit period. Variation of this might well be used because a credit on the use of gas through a given appliance would increase the volume of sales per customer and would give the customer greater incentive. It would help pay for the equipment and in many cases the customer's immediate investment in equipment is probably greater than the out-of-pocket expenditure to serve him.

Dealer Problem

Many of us are undoubtedly looking at the profit from the sale of appliances as being too important a factor, and I would urge that every one connected with the sales end of the industry give careful consideration to the particular value of increased gas load which is a recurring factor. The dealer problem enters into this and if we are to secure the widespread dealer cooperation obtained in the electric industry, more thought must be given to ways and means of encouraging them to sell gas appliances. It is going to be no easy task to build up the dealer cooperation in the gas business that is now enjoyed by other competing fuels, but a start must be made some time, and that time, in my judgment, is now.

In closing I do not wish to be construed as being pessimistic about the gas business because that is far from the truth. I am concerned about the continuing downward trend of the basic domestic load which has been continuing year after year. The big problem of marketing puts all others in the shadow, and while we have many other difficulties, it is my feeling they can be met and solved if we will concentrate our attention on the marketing end of the business.

WRITING ARREARS NOTICES

(Continued from page 147)

both horizontal and vertical so that they conformed exactly to the machines.

After finishing the notices for a control the operator folds the strip at every third notice in an accordion pleat manner allowing the carbon to fall out as she does so. The tray of ledger cards, still arranged in the manner in which the operator received them, is returned, together with the folded strip, to the ledger-keeper, who then checks the notices for neatness and accuracy and forwards them to the Collection Department where they are separated into collection units. Our ledger clerks prefer the notices in a continuous strip rather than having them separated into units, as it ensures safety in transportation, also facility in checking.

Collector's Final Bill Work Tickets, for unpaid final bills that have no forwarding address, are also written on this equipment. The design of this work ticket was made to conform to that of the arrears notices, so that a very minor adjustment of the carriage-return stop is all that is necessary to adapt the machines to this ticket.

Previously arrears notices were written on fan-fold machines. These machines had some very objectionable features, not only were they untidy in appearance but the special equipment on the back made it impossible to place them away at night and left them open to the dust of the office cleaning operations. Being specially designed machines they were expensive and their principle of manifolding made it impossible to use their forms on standard machines. In operating them it was necessary to move the carbon paper back after writing five notices. Compared to the one-time carbon plan this was a distinct loss of time.

Approximately 26,000 arrears notices and 2,200 final bill work tickets are written each month. The average production per operator on the fan-fold equipment over a six months' period was 88 arrears notices per hour and for final bills 54 work tickets per hour.

The average for the last three months on the new installation was, 128 arrears notices per operator per hour and 97 final bill work tickets per operator per hour.

A wage incentive plan has been applied to this work that is equally satisfactory to the company and the operators.

Since the adoption of the improved equipment and the inauguration of the wage incentive plan it has been possible to reduce the number of operators from three to two.

Controllers Institute to Meet in New York

WHAT are public utility companies doing regularly in the way of budgeting? An effort will be made to obtain detailed answers to that question in a conference arranged by The Controllers Institute of America, to be held Monday, April 25, at the Waldorf-Astoria Hotel, New York City. The conference has been called for 2:15 P.M. and the entire afternoon will be given to it. It will be open to controllers, budget officers and others of utility companies, and the Institute has broadened that term to include, in addition to gas and electric and water companies, street railways, steam raidroads, telegraph and telephone companies.

The conference will be a part of the Spring Conference of The Controllers Institute. It will be participated in almost exclusively by controllers and other officers of utility companies. An invitation is extended to representatives of utility companies generally to participate.

Francis B. Flahive, controller of the Columbia Gas & Electric Corporation, is chairman of this conference. Arrangements have been made, first, for a general presentation of the principles underlying budgeting by utility companies, after which members of the committee will introduce discussions of operating budgets, capital budgets, and cash budgets. Opportunity will be provided for a general discussion by those in the conference.

Controllers and others of utility companies who wish to attend should communicate with The Controllers Institute of America, at One East Forty-second Street, New York City, or with Mr. Flahive, for reservation cards.

Annual Report Forms

THE revised Annual Report Forms for gas and electric utilities, prepared by the National Association of Railroad and Utilities Commissioners, is now available from Secretary Clyde S. Bailey, 7413 New Post Office Building, Washington, D. C. This Form, which is coordinated with the revised Uniform Systems of Accounts for gas and for electric utilities, and adopted at the 1937 convention of the N.A.R.U.C., is sold at a price of $3 per copy to others than regulatory commissions, with a discount of 10% on orders for more than fifty copies.

Gas Kitchen Choice of Hollywood

THE recent trend toward the use of all-gas kitchens in Hollywood productions is but one phase of the motion picture influence. Thousands of players, technicians and executives in Southern California's motion picture industry live in all-gas homes, and it is no exaggeration to say that the gas kitchen is the choice in Hollywood.

Samuel Goldwyn's home is equipped with a custom-built gas range and a two-door Electrolux. Fred MacMurray owns the latest model gas refrigerator. Darryl Zanuck, William Goetz and Joseph M. Schenck, all executives at Twentieth Century-Fox Studio, bought deluxe gas ranges in recent months. There is a special range bearing the name plate of the Warner Brothers executive in H. B. Warner's home. The screen and radio star, Don Wilson, moved into a fine new home with an all-gas kitchen recently; and Bob Burns, one time of Van Buren, Arkansas, has a 100 per cent gas-equipped kitchen.

Consolidated Edison Gas Meters Increase

THE average number of gas meters of the Consolidated Edison Co. of New York in service during the year 1937 increased by 2.74%, according to the company's annual report. Sales of gas in cubic feet in 1937 were 0.06% below those of the previous year.

In the heating service classification gains of more than 30% occurred both in volume and revenue, in spite of the adverse effect on house heating sales of the relatively warm January and February. Revenue from all gas sales decreased 2.55%, reflecting lower rates in force.

Orders for gas appliances amounted to more than $5,000,000. The sale of gas ranges by the companies in the Consolidated system was discontinued on July 1 and of hotel and restaurant gas equipment on December 1. Such appliances are now promoted and sold under the cooperative merchandising plan whereby orders obtained by the companies are placed with cooperating dealers to be filled.

Employee Leads Prove Sales Boon

COMMENTING on the results of employee-lead campaigns, *Public Service News,* publication of the Public Service Corporation of New Jersey, makes the following significant remarks:

"Providing an opportunity for employees to help their company by furnishing the names of persons who may be prospective purchasers of electric or gas appliances the 'Lead-Sales' campaigns among Public Service people have been splendidly successful.

"Two such campaigns are in progress and the results for the first two months of this year have been very good. The 'Comfort Condition Homes Campaign' attained, from December 22 to March 7, 90 per cent of the quota set for the campaign, and the 'Gas Water-Heater Campaign,' to date, shows a 27.1 per cent gain, compared with the corresponding period of a similar campaign in 1937.

"'Lead-Sales' activity among Public Service employees, not regularly engaged in sales work, began in the latter part of 1931. In the first full year of this activity—1932—a total of 2,571 electric and gas appliances were sold as the result of leads turned in by Public Service people. Last year 13,907 electric and gas appliances were sold through employee-leads and from 1932 to 1937, inclusive, 52,298 appliances were sold through these leads.

"An analysis of the sales from employee-leads in 1937 shows that large as well as small appliances were sold. These sales included more than 2,200 automatic refrigerators, 2,142 gas ranges, 1,668 gas water-heaters, 1,757 washers, 1,157 vacuum cleaners, 257 electric ironers and 612 building heating installations."

Refrigerator Sales Gain

IN January 840 gas refrigerators were sold in the territory of the Consolidated Edison Company of New York and Westchester Lighting Company—27 per cent more than were sold during January of 1937. For the entire year of 1937 sales of gas refrigerators by companies of this system more than doubled those for the preceding year. There were 31,324 of them sold, compared with 15,626 during 1936—an increase of 100.4 per cent.

A feature of present sales is a trade-in allowance for gas refrigerators five years or more old, against the price of new ones. This allowance varies according to the age of the box.

Personnel Service

SERVICES OFFERED

Gas Engineer—graduate mechanical engineer, 20 years of broad experience in design, construction and operating with several large well managed gas properties. **1174.**

Young **natural gas engineer,** with eight years' experience, transmission lines, gas measurement, distribution, design of high and low pressure distribution systems, and maintenance. Outstanding record in heating, air conditioning and industrial installation design and supervision. Good personality, responsible, can handle any problem. **1176.**

Experimental engineer, over 6 years' field and research laboratory experience in pipe coatings and corrosion, gums, oils, etc.; load dispatching, measurement, unaccounted-for high and low pressure distribution practice, designs, property damage, customer service. Familiar with water gas manufacture. Previous 5 years' experience as water works chemist. Graduate; licensed, (34). **1179.**

State **distribution** or **selling** position. New Jersey preferred. Domestic Gas ranges or allied line. Wide selling experience. Now selling gas companies and dealers in New Jersey. Married, good health. **1184.**

Appliance Salesman—seeking a substantial line. Interested in knowing territories now available and on what basis. Have contacts with appliance dealers and utilities, in various territories. Will consider expense and commission proposition. Twenty years' experience, with a following. **1185.**

Valuation Accountant—having broad diversified experience in preparation of cost appraisals. Capable in organization and developing personnel for inventories, pricing and keeping fixed capital records. **1186.**

Gas Engineer (graduate, 1936) desires position with firm in the gas or allied industries. Have had one and one-half years' experience in by-product coke oven plant. **1187.**

Research and **development engineer** where an extensive and varied experience combined with initiative and originality will enable him to put to practical use his own or another's ideas; graduate engineer, has a Professional Engineer's license. (N. Y.) **1188.**

SERVICES OFFERED

Pipefitter, Welder, labor foreman; 9½ years with large southern gas company desires position with pipe line or gas company. Experience in laying mains, installation and servicing appliances, (29). **1189.**

Advertising Manager—11 years' experience as advertising manager large gas, electric and local transportation companies, plus 2 years as agency account representative. Thoroughly trained in planning and producing all types of advertising, publicity and sales promotion campaigns. Proved record of success. College graduate, age 34. Exceptional references. Moderate salary. **1190.**

Bookkeeper—Accountant: Over twelve years' experience with a public utility company on accounts receivable and accounts payable ledgers. Familiar with analyzing of records—general office work. Two years selling appliances. Married. **1191.**

By a man of much experience, with a small utility as **foreman, superintendent,** or **manager,** qualifications and experience filed with A. G. A. Personnel Service. **1192.**

Insurance Specialist, graduate engineer, experienced utilities, operating and holding company, meter reader to junior executive; specialized five years in producing large economics in insurance protection of all kinds for utility companies. Available special reports or full time. **1193.**

Engineer—College graduate with over five years' experience utilization department of large gas company and two years engineering department of eastern stove manufacturer. Desires position in engineering department appliance manufacturer. **1194.**

Salesman, Sales Supervisor—six years with large Eastern utility, seeks opportunity to develop domestic appliance and house-heating sales. Yearly average 1,576 gas refrigerators for three years as salesman; continuous monthly increase in unit sales as supervisor. Wide experience in employee and dealer co-operation, public good-will. **1195.**

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